MESSAGE FROM OUTGOING TBPE CHAIR, JAMES R. NICHOLS, P.E.

I will complete my term as chairman of the Texas Board of Professional Engineers on August 31, and can honestly say that it has been one of the most enjoyable experiences that I have had during my professional career.

Much has been accomplished during the past year, and some would say that the board has moved from “doing business the old way” to an agency that is meeting challenges head on and becoming more “user friendly.” Early in the year, a Management Audit was conducted by the State Auditor, and as a result of recommendations coming out of this audit, the Board has streamlined many of its rules and clarified procedures and policies with the result that our customers are better served, and our agency is more efficient.

The agency is undergoing Sunset Review for the first time since 1981, and a significant effort has been made to prepare for this important event. The initial phase of this review process was completed in August when the Self-Evaluation Report was submitted to the Sunset Advisory Commission. They will be working with the Board to evaluate the continued need for the agency, propose any necessary statutory or management changes and develop legislation to be introduced to the 78th legislature to implement any proposed changes. These activities are extremely critical to the Board, as our very future depends upon the outcome of this process.

Another important initiative undertaken during this past year was an effort to resume a working relationship with the Texas Board of Architectural Examiners. A joint meeting of the two boards was held earlier in the year, and two more are scheduled for this Fall. Our professions have many common interests, and it is felt that a closer relationship will help us better serve the public.

As this year comes to a close, we are also completing our first year as a Self-Directed, Semi-Independent Agency, which has given us a certain amount of flexibility in developing our programs, establishing fees and developing our own budget. From our point of view, the pilot project has been successful. Whether or not it will be continued beyond the two-year pilot program will be determined by the Legislature.

I’ve enjoyed my year as chairman and sincerely appreciate the support given me by other members of the Board and the agency staff. Much has been accomplished due to the efforts of these committed people.

I want to congratulate and extend my best wishes to our incoming chairperson, Brenda Bradley Smith, P.E. She has been a tireless worker for the Board, and I am confident that next year will be a productive and successful time under her leadership.
Texas Board of Professional Engineers Elects New Officers for 2002-2003

Brenda Bradley Smith, P.E. of the Houston area has been elected Chair of the Texas Board of Professional Engineers (TBPE). Ms. Smith is President of Alexander Engineering, Inc. located in Spring, Texas. She has been active in the Texas Society of Professional Engineers and has served as Chair of the Professional Engineers in Private Practice Division. She is also active in the National Society of Professional Engineers and was elected to serve as Secretary of the Professional Engineers in Private Practice Division for 2002 - 2004. Ms. Smith is a member and past chair of the Civil Engineering Academy of Texas Tech University (TTU); she also served a six year term as a member of the TTU Civil Engineering Advisory Council. Texas Governor George W. Bush appointed Ms. Smith to the On-Site Wastewater Treatment Research Council in 1996 where she served as Vice Chair. In 1997, Governor Bush appointed her to the Texas Board of Professional Engineers. She earned a Bachelor of Arts degree from Trinity University in Environmental Studies and a Master of Science degree from Texas Tech University in Civil Engineering (Environmental option). She and her husband, Wayne, live in Baytown.

Robert M. Sweazy, Ph.D., P.E. of Lubbock has been elected Vice Chair of the TBPE. He is Vice President for Research, Graduate Studies, Technology Transfer, and Economic Development at Texas Tech University. Dr. Sweazy is a past President of the Universities Council on Water Resources. He is a member of the Society of Research Administrators, the National Council of University Research Administrators and the American Association for the Advancement of Science. He received his doctorate in Civil Engineering from the University of Oklahoma. He and his wife, Anne, have one child, Suzanne.

Govind Nadkarni, P.E., of Corpus Christi has been elected Secretary of TBPE. Mr. Nadkarni received his B.S. in Civil Engineering from Gujarat University (India) and Master of Science in Civil Engineering from the University of Southern California, Los Angeles, California. He established Govind and Associates, Inc. in 1984, which includes Civil, Structural, Survey & Marine Design services. In 1989, he established Indtech, Inc. which includes Mechanical, Electrical, Instrumentation and Process Design services. Mr. Nadkarni serves as President of both firms. In 1993, he acquired Callins & Haggard, Inc. as an affiliate of Govind & Associates, Inc. He is a member of the American Society of Civil Engineers, and has served ASCE as a past Vice President of Technical Affairs and as president of Corpus Christi Section. Mr. Nadkarni is also a member of TSPE, NSPE, American Concrete Institute, Institution of Engineers (INDIA), and Chartered Engineer (INDIA). He and his wife, Bhakti, have a son, Amit, and a daughter, Reema.

New Engineering Ethics Video in Production

Development of a new ethics video is underway at the National Institute for Engineering Ethics (NIEE) through the combined efforts of a team with representation from several universities and various disciplines:

- Civil Engineers Jimmy Smith and Bill Lawson, Texas Tech University,
- Electrical Engineer Michael Loui, University of Illinois,
- Mechanical Engineer Steve Nichols, UT/Austin,
- Engineer Practitioners Phil Ulmer and Carl Stoogloud, and
- Philosophers Vivian Weil, Illinois Institute of Technology, and Fred Suppe, Texas Tech University.

In association with the Emmy Award-winning and Oscar-nominated video production firm Great Projects Film Co., New York, NY, and under the direction of the NIEE at Texas Tech University, this video team is working to create a new video that will dramatize a fictional but realistic case study in engineering ethics.

The development, production and evaluation of this new video is made possible by a grant from the National Science Foundation, and contributions from the following major contributors: Harry Bovay, P.E., Victor O. Schinnerer Corp., National Society of Professional Engineers, American Society of Mechanical Engineers, Chair for Free Enterprise at the University of Texas at Austin, and William Lohta, P.E., retired president, American Electric Power.

Great Projects, the producer of the 1989 video “Gilbane Gold” is producing the new film in three versions: a 20-25 minute “basic” story version, a “segmented” version that can be viewed in parts, and an “interactive” version on DVD that allows the viewer to observe the consequences of different ethical decisions. The film will improve the ability of students and practicing engineers to:

- Evaluate alternatives according to basic ethical values and through simple tests
- Identify and distinguish ethical issues, technical issues, and economic issues
- Identify affected parties (stakeholders) and their rights and responsibilities
- Identify social and political constraints on possible solutions
- Determine whether additional information is needed to make a good decision
- Formulate alternative courses of action and
- Test the alternatives and imagine possible consequences of those alternatives.

Also, the video will help the viewers become more aware that:

- Ethical considerations are an integral part of making engineering decisions
- A code of ethics will provide guidance in the decision-making process
- The obligations of a code of ethics do not stop at the United States border and
- The obligations of engineers go beyond fulfilling a contract with a client or customer.

Completion and evaluation will occur during 2003. A complimentary copy of the new video will be sent to U.S. engineering deans and to major engineering and applied ethics societies in the United States.
The Professional Engineer and Politics
(A position statement from the Texas Society of Professional Engineers’ Web Site -- www.tspe.org)

In a free society, politics and government are inseparable. Politics shapes the character of government -- and government affects Americans at the local, state and national level.

The engineering profession is directly affected by the course which government pursues regarding preservation of the free enterprise system and is particularly sensitive to actions of government which affect the professional climate in this country.

The importance of the relationship between the engineer and elected officials is exemplified by the remedy being sought for our state and nation's civil justice crisis.

The professional engineer must bring to the legislative process the practical, economic, legal and ethical viewpoint that the engineer is known to possess. Professionals and businessmen who neglect politics cannot lament unsound legislation. The engineer must participate in politics in order to influence legislation.

The Texas Society of Professional Engineers (TSPE) has developed an organization to affect government action at the state level while the National Society of Professional Engineers (NSPE) is providing the same service at the national level.

Through their legislative committees, executive boards, contact committees and staffs, TSPE and NSPE are working to ensure that the views of their members are voiced in legislative halls.

In addition, if you have any questions or concerns regarding the legislative or political process, please call the TSPE Legislative Information Service, 512/472-9286 or 800/580-8973. Members of TSPE may request copies of specific bills.

Texas Society of Professional Engineers Passes Resolution Related to Ethics and Political Contributions

On June 13, 2002, the Texas Society of Professional Engineers’ Committee on Ethical Practices proposed the following resolution to the TSPE Board of Directors at its Annual Meeting in Arlington, Texas. The resolution passed by unanimous vote.

Whereas: The Texas Society of Professional Engineers (TSPE) strongly encourages engineers and engineering firms to be actively involved in the political process and to support political candidates of their choice with their time and financial contributions as desired and appropriate, and

Whereas: The Texas Society of Professional Engineers also strongly encourages engineers in Texas to be involved in providing or offering to provide engineering services to state, county, and city governments for the benefit of the citizens of Texas, and

Whereas: The Texas Society of Professional Engineers takes the position that political contributions should not be necessary or expected in order to be considered qualified, or to be awarded contracts, for work for public authorities, and

Whereas: The Texas Society of Professional Engineers endorses the National Society of Professional Engineers (NSPE) position on the matter of contributions as documented in the NSPE Code of Ethics Section II.5.b: “Engineers shall not offer, give, solicit or receive, either directly or indirectly, any contribution to influence the award of contracts by public authority, or which may be reasonably construed by the public as having the effect of intent to influence the awarding of contracts...”

Therefore: It is resolved that the TSPE Executive Committee shall create a "Special Commission on Practices Related to Political Contributions" consisting of representatives from all TSPE regions and including invited participation by members of the Texas Engineering Alliance, ACEC-Texas, Texas Board of Professional Engineers and/or other appropriate representatives. This Commission will:

1) Examine the relationship between engineers/engineering firms receiving work from public authorities and the political contributions made to those authorities;
2) Determine the extent to which this issue is a professional or ethical problem;
3) Identify ways that this issue ought to be professionally and ethically addressed;
4) Recommend a position on the matter to the TSPE Executive Committee; and
5) Recommend a method of implementing the position that will be beneficial to, and in the best interest of, the citizens of Texas, the engineering profession, and our engineering society.

TSPE 2001-2002 Members of the Ethical Practices Committee:

Byron Blaschke, PE       TSPE State Director - Brazos Chapter
Sidney Burris, Ph.D., PE  TSPE Prof. Engineers in Education Chair
William Fendley, PE      TSPE Vice President Region IV
BertLuck, PE              TSPE Past President
Bob Wallace, PE           TSPE Vice President Region II
Jimmy Smith, Ph.D., P.E.  Chair, TSPE Committee on Ethical Practices
Boston: How should we respond to the wave of scandals that have hit corporate America? Everyone in Washington seems to agree on the answer: more law. In particular, more criminal law.

Congressional Democrats promise to add new federal fraud provisions to a bill that may be considered as early as this week. And in his speech on Wall Street yesterday, President Bush endorsed a similar approach - proposing a doubling of prison terms for mail and wire fraud and a broader notion of obstruction of justice as well as beefed-up oversight by the Securities and Exchange Commission.

The push for new criminal laws is understandable. Although securities laws already include stiff criminal penalties, those laws sometimes make prosecution difficult (usually because under their provisions intent is hard to prove). It isn't even clear whether the actions of, say, Enron or WorldCom executives violated these laws.

Toughening existing criminal laws and adding new ones might seem the best way to make sure that future Errons and WorldComs won't happen - and to send a clear message that America will not tolerate dishonesty in corporate boardrooms.

But it won't work. We have gone down this path many times before, and if experience is any guide, new criminal laws are as likely to make things worse as to make them better. The reason is both simple and all too easily ignored: Criminal laws lead people to focus on what is legal instead of what is right.

...Executives are more likely to ask what they can get away with legally ... than to worry about what's fair and honest.

There is another, related, problem. White-collar criminal cases that go to trial almost always focus on behavior that is right on the line between legal and illegal. (Defendants usually plead guilty before trial when they have clearly violated the law, and prosecutors generally do not charge defendants they cannot convict.)

As more criminal laws cover technical violations, more of those white-collar criminal trials will deal with technicalities. The result may be to trivialize corporate crime and undermine the public's respect for law generally. We risk robbing "wrong" of its bite.

We do not mean to suggest that it is impossible to legislate morality in the business world and elsewhere; that happens all the time and sometimes works very well. The point is that it is possible to over legis late, frantically criminalizing more behavior with each new corporate scandal.

Better to leave criminal law alone (it's too broad already) and to use some of the civil reform measures (such as a more independent accounting regulator) endorsed by both the president and Congressional Democrats. Expanding the criminal fraud laws may be an easy political sell, but it is not a solution.

We may wind up with tougher penalties. But we won't get more honest corporate behavior.
WEB-BASED ENGINEERING ETHICS EDUCATION PROGRAM
By William D. Lawson, P.E., Deputy Director, National Institute for Engineering Ethics

The National Institute for Engineering Ethics (NIEE) and the Murdough Center for Engineering Professionalism (MCEP), at Texas Tech University are pleased to introduce “Web-Based Engineering Ethics Learning Modules for Engineers and Engineering Students.”

Development of these modules was initiated through a grant from Texas Tech University’s Teaching, Learning and Technology Center, and completed with subsequent support from Texas Tech’s President, Engineering Dean, and NIEE/MCEP.

The content of the modules is an expansion of the Engineering Ethics Correspondence Courses developed in 1990 by the Murdough Center, with initial encouragement and support of the National Council of Examiners for Engineers and Surveyors (NCEES) and the Texas Board of Professional Engineers.

These ethics courses have had over 1,500 enrollments from 49 states, Puerto Rico, Guam, Canada, Germany and United Arab Emirates.

The web-based program is scheduled to go on-line in September 2002. Individuals completing a learning module will be awarded Professional Development Hours (PDHs); choices for enrollment will be 1-hour, 2-hour, 4-hour, 8-hour, and 20-hour duration (clock hours). Course credit will be assigned based on standards set forth in the NCEES model rules for continuing professional competency.

Program developer, Bill Lawson, notes that the program objective is to make certain basic and strategic course material on professionalism and ethics more accessible to both engineering students and engineer practitioners.

The learning modules include narrated audio presentations, video clips, case studies, links to ethics web sites, and various assessment tools.

The web-based course will present the various educational components in a menu format, allowing the learner to select the presentations and case studies that most interest her or him. It will provide guidelines for making selections (require some of this, some of that), but as much as possible, we allow the learner to choose.

The course design is flexible in that the learner can conveniently specify the duration of the course and can tailor the components of the course to his/her needs and interests.

The target audience includes both practicing engineers and engineering students enrolled in ABET-accredited programs. Much of the case study material consists of adaptations of case studies published by the National Society of Professional Engineers (NSPE) Board of Ethical Review. However, these cases have been adapted to enhance readability, clarity, and educational effectiveness. Both normative ethical theory and the NSPE Code of Ethics are used to illuminate the ethics issues discussed in each case.

NIEE/MCEP Director, Professor Jimmy Smith, originated the Ethics Correspondence Courses and has received numerous requests for web-based ethics instruction: “We are pleased to respond to the needs of the increasing numbers of engineers and engineering students who desire instruction in the area of engineering ethics and professionalism.”

Dr. Smith notes that the primary impact of these Internet-based learning modules will be to make ethics course material available to more people, more easily and conveniently.

“Through the learning modules, we can innovatively and effectively use technology to reach engineers and engineering students we otherwise could not reach.”

For more information, please visit the NIEE website (www.niee.org) or contact the National Institute for Engineering Ethics at 806-742-NIEE (742-6433).
ETHICS IS A BENCHMARK FOR TxDOT

Michael W. Behrens, P.E.
Executive Director
Texas Department of Transportation

Employees of the Texas Department of Transportation are expected to do more than simply what is required by law; we are expected to do the right thing. And doing the right thing means looking out for the transportation interests of the citizens of Texas, placing our citizen's interests above our own personal interests.

We trust that TxDOT employees conduct themselves in a professional manner at all times. But we are required to do so when representing this agency. It can be no other way because our actions in the workplace are the substance of our public image and credibility.

TxDOT has a proud history of dedicated employees who knew they did not have to memorize a long list of principles of ethical conduct in order to be ethical; they just knew the difference between right and wrong and chose to do what's right.

Let's embrace our department's tradition of a strong system of moral values and our actions will become a part of this legacy.

1 This is the lead-in statement in the TxDOT Workbook developed for a course in Professional Ethics and presented to TxDOT employees by the Murdough Center for Engineering Professionalism, Texas Tech University. The TxDOT Professional Ethics course has been presented 66 times since 1996.

ENGINEERING ETHICS DAY 2002

Engineering Ethics Day 2002 will be held on Thursday, October 17, 2002 at Texas Tech University.

Engineering Ethics Day activities at Texas Tech University are co-hosted by the College of Engineering, the Engineering Dean’s Council, the Murdough Center for Engineering Professionalism, and the National Institute for Engineering Ethics.

Public is invited.

The speakers this year will be:

William J. Lhota, P.E., Retired President of American Electric Power Service Corporation, Energy Delivery Business Unit, and current Chair of the National Society of Professional Engineers' Board of Ethical Review,

and

William M. Marcy, Ph.D., P.E., Provost, and former Dean of Engineering, Texas Tech University.
E. D. “Dave” Dorchester, P.E., an engineer promoting new ideas for over 50 years, continues to be a highly active and productive member of the engineering profession. The Texas Society of Professional Engineers proudly nominated him for the prestigious NSPE Distinguished Service Award for 2002.

After receiving his B. S. in Electrical Engineering from the University of Texas at Austin and his Master of Science Degree from California Institute of Technology, Pasadena, California, Dave began his professional career as a Junior Engineer for Texas Electric Service Company in 1949 and worked up through the company, retiring 39 years later as Engineering Manager, Western Division, Midland, Texas.

Dave has been highly involved with TSPE and NSPE for many years. Prior to his election as President of our state society for 1991-92, his service to TSPE included member and chair of the TSPE Political Action Committee and the TSPE Water Education Committee, membership on the TSPE Legislative and Governmental Affairs, TSPE Water Committee, Vice President - Region 1, and President-Elect. He has capably served the NSPE in many leadership capacities, including National Director, Member, Vice Chair and Chair - Registration & Qualification to Practice, Chair – NSPE Legal Defense Fund Committee, and member and chair of the NSPE Board of Ethical Review.

He has surfaced as an outstanding leader in the engineering professions at large, having served two terms on the engineering licensing board of Texas, first appointment by Governor Clements in 1987 and second appointment by Governor Bush in 1996. He was elected to several offices while on the Texas State Board of Registration of Professional Engineers, including Chairman twice (1990-1991 and 2000-2001). During his service to the engineering board, Dave created many new initiatives, making the Texas Board known throughout the United States, Mexico, and Canada for its proactive position in matters improving the engineering profession in Texas, the nation, and members of the NAFTA.

Examples of initiatives he developed during his 12 years on the Board include establishment of an Education Advisory Committee made up of all 17 engineering deans in Texas and an Industry Advisory Committee made up of about 20 engineering leaders in the state. During this same period, as noted earlier, Dave served as Vice President and President of the Texas Society of Professional Engineers. The interaction he fostered and encouraged among TSPE, the Board committees, and members of the Board created an environment very conducive to excellent cooperation on many issues facing the engineering profession. With Dave as most often the leader, and always their supporter, these groups worked together creating many improvements in engineering education and practice in the state, most notably the development of numerous programs to include ethics in engineering education for the benefit of students, and ultimately the entire profession.

Other important initiatives led by Dave included the first meeting of the chairmen of all engineering licensing boards in the US, the promotion of creating the NAFTA Forum on Engineering Practice and serving as the NSPE representative on USCIEP. In addition to his service as an advisor to many university programs, Dave has served several other national organizations, including NCEES as chair of the Professionalism and Ethics Committee and member of the NCEES Uniform Procedures and Legislative Guidance Committee. This year, he completed his two-year term as President of the National Institute for Engineering Ethics.

Dave has also been highly active in an extremely wide variety of civic affairs. He has served as:

- President and Director of United Way of Midland;
- Chairman-United Way Financial Review Board, Midland;
- Director, Texas United Community Services;
- President, VP and Director of Midland Rotary Club;
- Director - Better Business Bureau of Midland-Odessa;
- Trustee - Museum of the Southwest;
- Board Chair & Trustee-Baptist Geriatric Hospital-San Angelo;
- President and Director, Midland Archaeological Society;
- Building Committee Chair & Deacon, First Baptist Church;
- Member of the Board of Governors-Midland Memorial Hospital.

His previous honors and awards include:

- Paul Harris Fellowship by Midland Rotary Club;
- John Emory Adams Award for Contributions to West Texas Archaeology;
- Engineer of the Year, Permian Basin Chapter of TSPE;
- Engineer of the Year, TSPE State Award;
- Honorary Member, Federacion de Colegios de Ingenieros Civiles;
- Distinguished Engineer, Texas Engineering Foundation;
- NCEES Southern Zone Distinguished Service Award;
- Professional Development Award, TTI Murdoch Center;
- NCEES Distinguished Service Award (National Award).

Dave and his wife, Mary, reside in Midland, Texas. They have two children and 6 grandchildren.
The National Institute for Engineering Ethics is pleased to announce our latest educational initiative, the Applied Ethics Case of the Month program. The program is scheduled to transition to the NIEE from the Professional Engineering Practice Liaison Program, College of Engineering, University of Washington, on October 15, 2002, upon the retirement of Ron Bucknam, P.E., Ph.D from the University of Washington. A Memorandum of Understanding between NIEE and the University of Washington was executed in November 2001.

The program was founded by Dr. Bucknam in 1997. Since then, the “Case of the Month Club” (as it is known) has been used by more than 95 universities and its web site has had more than 50,000 hits.

The program consists of applied ethics cases taken from actual professional practice and presented in narrative format, with the names of the participants and the locations altered to preserve anonymity. Each case is linked to a series of suggested solutions, not all of which are necessarily ethical but which represent reactions commonly found in professional practice. Site visitors are given the opportunity to vote on their preferred course of action, as well as to offer commentary. Results are tabulated at the end of the voting period, and the statistical responses are reported, along with commentary.

NIEE has been associated with the Case of the Month program for many years in that NIEE Director, Dr. Jinny Smith, has served on the Case of the Month Board of Review. “I am pleased that NIEE will be able to carry on the fine work of the Case of the Month program,” says Smith. “Dr. Bucknam’s passion for ethics in professional practice will be continued under the diligent guidance of NIEE Deputy Director Bill Lawson, P.E.”

Indeed, actual real-life situations are the central notion upon which the program is founded. “The focus of the program is to present cases taken from professional practice in order to stimulate greater emphasis on ethical issues in a real-world context,” says Ron Bucknam, founder of the program. “Classical ethical theories with their highly technical jargon have a way of obscuring the gut-wrenching circumstances sometimes encountered in professional practice, but it is important for ethics to be applied.”

Editors Note: To participate in the Case of the Month, simply access the program URL and follow links to the voting form. The current case, with the alternative solutions, appears below. We encourage you to visit the web site, vote on this case, and then check back for the tabulated survey results.

The Current Case of the “Applied Ethics Case of the Month”
May-August 2002 — One Good Turn Deserves Another — (Case 1027)

As part of the professional services your firm (Multiplex Design Ltd) offers, you provide site civil engineering designs for large office complex developments, including road, parking lot and walkway layouts; pavement design recommendations; architectural earthwork design for landscaping; surface water retention/detention and drainage design; and the design of on-site wastewater treatment and disposal facilities. Most of your firm’s clients are relatively large developers, and since you are a project manager for Multiplex Design, you work closely with a number of these clients for various projects. Usually, you work on a project-by-project basis for individual sites within a client’s substantially larger development complex.

Since it appears to be second nature to many developers, it is not unusual for a client to tell you that funds are limited for your services on a specific project site, other firms have been knocking on their door in increasing numbers seeking to obtain design contracts for the same kind of services you provide, and you should remember there are a lot more project sites to be designed within the overall complex planned by the developer. And so it is with Bill Broot, development manager for Universal International Unlimited Developers, one of your clients.

You have been doing several design projects for Universal International Unlimited for a large complex a few miles outside of town which will eventually expand to more than 20 multi-story office cluster sites. So far you have been involved in all of the first five cluster projects in the complex, the latest being the Dawson Enterprises four-building site. Despite the fact that you had been careful to spell out your scope of work in your design contract with Universal International, Bill Broot asked you to provide recommendations for several items not included in your scope of work for the Dawson site, and you complied (especially when he told you there was a lot more work on other sites coming in a couple of months).

Just this morning, your in-house accountant notified you that the final figures for the Dawson project showed that your group had overrun your $28,500 contract budget by $6,300, and there is no authorization to bill Universal International for this additional work. Your original estimated profit for the Dawson project was $4,000, and now that is gone, plus more.

After a meager lunch (and several aspirin tablets), you sit down to concentrate on some paperwork piled high on your desk when the receptionist at the front desk calls you on the intercom and says that Bill Broot wants you to call him about another project. You call Broot, find out that the new project is directly adjacent to the Dawson Enterprises site, and the
work required is relatively similar in scope to what your original contract for the Dawson project had required. You agree to put a cost estimate together and call Broot back in the morning.

You complete your estimate for the new project site. If the site were in a totally new area of the entire development complex, the budget estimate for your design work would be $31,700. However, since the new site is directly adjacent to the Dawson site, much of the information your group had gathered for the Dawson site, as well as a substantial amount of the basic analyses for that project, could be used for the new project. If you deduct the estimated cost of this

information and analyses from the $31,700, you find you could probably do the work for the new project site for $22,800.

Keeping in mind the loss you suffered on the Dawson project, as well as Broot’s remarks about plenty more work coming in the overall complex, and the intensity of your competition pounding on his door for work, you must decide what to give Broot as your design contract amount for the new project.

*What do you decide to tell Broot in the morning?*

### Alternate Approaches

1. The budget estimate you give Broot is $63,400, lump sum, twice what you think it would take on a new site, but the going rate for obnoxious jerks. Hey, you are not in the business of engineering for experience; you’re in it for *cash*. Since Broot has shown himself to be a difficult client, if not a credit risk, and since you bill lump sum, you see no reason not to get all you can out of the guy if he’ll agree to it. After all, he’ll surely seek to “lean” on you to cut your fee, and you want something left after the cutting is done. Enough already!

2. The budget estimate you give Broot is $38,000, lump sum, the cost of your services for a new site plus the “extra” unbilled services he finagled out of you on the last project. You would like to bill him double if you could, but you are just not quite that strong. Still, you see no reason not to get all you can out of the guy if he’ll agree to it.

3. The budget estimate you give Broot is $31,700, lump sum, the cost of your services for a new site. Whereas you would like to bill him double for the work if you could (he’s that much of a pain), you know he will only go so far, and this is probably the best fee you can hope for. As it is, you are concerned how he will come back and ask you to lower your fee. You see no reason not to get all you can out of the guy if he’ll agree to it.

4. The budget estimate you give Broot is $22,800, lump sum, the cost of your services for a follow-on site. Whereas you would like to bill him double for the work if you could (he’s that much of a pain), you know how competitive he is, and this is probably the best you can hope for. The $6,300 in unbilled effort from the past project is simply a cost of doing business, and you are thankful to have the job.

5. The budget estimate you give Broot is $15,850, lump sum, half of the cost of your services for a new site. It seems your competitors always find some way to cut their fee to half of yours, and this time you beat them to it. This is the only way to stay in business in a tight market.

6. The budget estimate you give Broot is $31,700, not to exceed, on a time-and-materials basis, the cost of your services for a new site. You are a thorough person, and you know you can justify this figure to Broot by down-playing the follow-on aspects of the work. It won’t be an easy negotiation, but your logical approach, objective figures, and calm demeanor will win the day. This will allow you to complete the project at an actual follow-on cost of $22,800, but to adjust the billings to make up for unbilled (past) revenue.

7. The budget estimate you give Broot is $31,700, not to exceed, on a time-and-materials basis, the cost of your services for a new site. You are a thorough person, and you know you can justify this figure to Broot by down-playing the follow-on character of the work. It won’t be an easy negotiation, but your logical approach, objective figures, and calm demeanor will win the day. Sure there is extra money in the budget, but you view this as a contingency. Under good circumstances this will allow you to complete the project at a normal, if not relaxed, pace, and under difficult circumstances it gives you some badly-needed financial breathing room.

8. The budget estimate you give Broot is $22,800, not to exceed, on a time-and-materials basis, the cost of your services for a follow-on site. You figure that Broot will be so enamoured with your low fee that he’ll skate through the negotiations and sign you up without looking at the details. Then he won’t notice how you carefully fluffed your low-ball budget by failing to include certain non-essential, yet desired, services you have normally identified as part of the scope of work. Once you get into the new project, the need for those services will become apparent, but at that point Broot will have no choice but give you the change orders for additional fees you seek. Is this not the way the game is played? Finally, Broot will respect you both as an engineer and a businessman.

9. The budget estimate you give Broot is $22,800, not to exceed, on a time-and-materials basis, the cost of your services for a follow-on site. You know that Broot is a hard-driving businessman, and this is all he will pay. You also know the good will you bought on the last project ($6,300 in unbilled effort) will get you this project, but that is all. This is simply the cost of doing business. Considering the options, it is less expensive than developing a new client relationship with different developer.

10. The budget estimate you give Broot is $22,800, not to exceed, on a time-and-materials basis, the cost of your services for a follow-on site. You know that Broot is a hard-driving businessman, and this is all he will pay. But this doesn’t concern you all that much, since you know you can recoup the cost of doing business in Broot’s market segment from your other, less-astute, municipal clients. You do this by assigning less-efficient personnel to their projects, by negotiating more generous billable rates, and by more broadly defining the billable aspects of the work, among other things. Your municipal clients are great people. You know they trust you to do the right thing, and that’s what business is all about.
There are two general ethical questions which we might want answers to. One is, which actions are the morally right actions? A second is, why is a morally right action morally right? Or in other words, what is it that makes an action morally right?

**Two general ethical questions:**

1. Which actions are the morally right actions?
2. What is it that makes an action morally right?

An answer to the first question will be some sort of list, or set of instructions indicating which actions are morally right. The following short list, though oversimplified, may be considered as an example.

1. Always tell the truth
2. Always keep your promises
3. Always treat others and their property with respect

Even if this isn’t a complete list, this is a good start, with three very sound moral principles. The point they are introduced to illustrate is that even with this short set of moral principles, there are fairly common circumstances which lead to moral dilemmas.

Suppose you’ve promised a friend of yours to help him move this Saturday. Your friend is counting on using your truck to get some large pieces of furniture moved, and to get everything moved in one day. Suppose that you go out to your truck on Saturday morning, and just after you start it up, you hear a loud snap and a bang—your timing belt broke. There’s no way for you to drive your truck now—in fact, you’ll need to get a ride to work on Monday. As a conscientious friend, you call the local truck rentals, but everything is already reserved for the day. Suppose that you have one last option to keep your promise, as principle 2 directs you to. You are good friends with your next-door neighbor, who has an old truck. Your neighbor is away for the weekend, but you keep a key to their house for them, in case they lock themselves out, and you know where they keep the keys for the truck. They probably wouldn’t mind if you used it to drive to work, but because moving is hard on the truck, and the truck is old, they would probably be reluctant to lend it for that purpose. Of course, in any case, you don’t have their permission.

These circumstances, together with the second and third principles, present you with a moral dilemma. If you borrow the truck without permission, you keep your promise, but you fail to treat your neighbor and his property with respect. If you don’t borrow the truck, you treat your neighbor and his property with respect, but you fail to keep your promise.

One response is to make an exception to one of the moral principles; for example, “always keep your promises, if you can” or “always treat others and their property with respect, if you can.” Neither of these amended principles helps with the dilemma, since you can either keep your promise or treat your neighbor with respect. The dilemma is to decide which one.

If only one principle were modified, that would help us out of our dilemma; but this raises the same question: which principle is it right to make an exception to?

Ultimately, the question we need answered is the second one, namely: What is it that makes an action morally right? If we knew the answer to that question, we would have help out of our dilemma. And in general, if we knew what makes an action morally right, we can then determine which actions are the morally right actions. In other words, the second question is more fundamental than the first.

Philosophers have been trying to answer that question for at least 2400 years, and unfortunately, there is no consensus regarding the answer. Nonetheless, the answers given by three philosophers—Immanuel Kant, John Stuart Mill, and Aristotle—are generally regarded as the most significant.

Ultimately, the question we need answered is:
What is it that makes an action morally right?
If we knew the answer to that question, we would have help out of moral dilemmas.

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1 This article may be reproduced and given to students for their study and consideration. The questions following the article may be used as homework or class-work if desired. Answers to the questions may be obtained by faculty by emailing Bill.Lawson@coe.ttu.edu or Jimmy.Smith@coe.ttu.edu

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To get at the ideas behind Kant’s and Mill’s theories, consider a new scenario. Valerie is out on a walk on her day off. As she turns a corner, she notices some smoke coming out from the kitchen window of a house across the street. She stops to see whether the smoke is from a fire or just from some cooking, when she hears the screams of two young children, who she spots in a window upstairs. Valerie decides to go ring the doorbell to make sure the parents or guardian have things under control. On her way across the street, she notices that the garage doors are open, and that the garage is empty—so when no one answers the doorbell, Valerie is pressed to make a decision.

The smoke is getting thicker, and she can hear the children still screaming. She stops to listen for sirens, just in case someone already called the fire department, but there is no sign of a fire truck. Valerie decides to let herself in. She finds that the front door is locked, but is able to let herself in through the garage. With these delays, the house is already thick with smoke, so she decides to rescue the kids before calling the fire department. It is hard for her to find her way around an unfamiliar house filled with smoke. Once upstairs, she has no trouble finding the kids, since they’re still screaming, but they’ve locked themselves in their bedroom. It takes her a few minutes to get them to unlock the door, but by this time, the fire department has arrived and has extended a ladder to the bedroom window. Valerie hands the children to a fireman on the ladder one at a time. Both children are scared and screaming. The second child is especially scared. As Valerie passes him to the fireman, he squirms out of her hands, and falls onto the sidewalk and dies.

Although her rescue efforts finished tragically, it is not hard to see Valerie as having done the morally right thing in trying to rescue the children. After all, we could hardly ask more of her: she was alert to notice the fire in the first place, she was courageous and brave in deciding to rescue the children, she was responsible enough to listen for fire engines before she entered the burning house, and she was level-headed throughout her attempt to locate and rescue the children. Despite the death of the second child, Valerie’s actions were heroic.

These features of Valerie’s actions are captured by the notion of good intentions, which is central to Immanuel Kant’s moral theory. According to Kant, an action is morally right if it is done with intentions which every rational person would approve. Since any rational person trapped in a burning building would want to be rescued, Kant’s theory explains why Valerie’s actions were morally right.

One type of action Kant held as a paradigm of a morally right action was telling the truth. Kant thought that it was never morally right to lie, under any circumstances. First of all, no rational person wants to be lied to. Second, if lying were morally permissible, then there would be nothing to prevent someone from lying. Very quickly, the entire practice of communication would halt. Since no rational person could want this result, there are two reasons why lying is immoral for Kant.

There does seem to be something right about this idea. But while Kant’s theory is very successful in capturing good intentions as a feature of morally right actions, there are some problems with it. For example, Kant would obviously accept the first two moral principles in the short list above. Turning our attention to the third, it seems that respecting other people and their property is also something every rational person would approve. In fact, this is part of Kant’s view. But as we saw in the first example above, accepting all three principles can lead to moral dilemmas. So it looks like Kant’s theory doesn’t help us out of them.

Recall Valerie’s attempt to rescue the two children. Imagine the parents returning home to find that there had been a fire in their house, and a fireman explaining to the parents that one son died while an heroic passerby attempted to rescue him from the blaze. One very likely and understandable reaction for the parents is to be upset with Valerie, since it appears very likely that both children would be alive if she hadn’t attempted to rescue them. After all, the firemen arrived in time to save both children, and they are specially trained to rescue people from fires. If Valerie had just minded her own business, if she had just taken her walk along a different route, if she had just taken a different day off, both of their children would still be alive. These considerations are bound to be very vexing for the parents. That Valerie was actually very alert, courageous, responsible, level-headed, and generally heroic does nothing to bring their son back, and so is bound to console the parents very little. If you are able to imagine yourself in the position of the parents, it is actually a quite natural conclusion to say that despite her heroic actions and good intentions, Valerie’s actions were morally wrong, because they led to losing an innocent person’s life, which is a morally bad outcome.

The moral importance of an action’s outcome or consequences is captured by John Stuart Mill’s theory, which is called “utilitarianism.” Utilitarianism is based on a notion Mill called “utility,” which is a composite notion consisting of three morally relevant components of the consequences of an action, namely, happiness, health, and well-being. So, for instance, making someone happier increases utility, and is a morally right action according to Utilitarianism. Likewise, making someone healthier—say, by giving them a vitamin, or by saving their life—increases utility, and is a morally right action. Along the same lines, making two people healthier is morally better than making one person healthy, though both are morally good actions.

Suppose a sick person needs to take a syrup which tastes pretty bad. In this case, the increase in health must be greater than the decrease in happiness caused by the bad taste for it to
be a morally right action. In other words, utilitarianism is concerned with net changes in utility. According to Utilitarianism, if an action produces a net increase in utility, it’s morally right; if an action produces a net decrease, it’s morally wrong.

Now it might seem strange to compare the amount of change in happiness with the amount of change in health. Both happiness and health are abstract to begin with; to compare changes in them might seem a little bizarre. The general idea is that all of the effects of an action in terms of happiness, health, and well-being are added up in some way, and if the sum is a positive—if there is a net increase in utility—the action is morally right, and if the sum is negative—if there is a net decrease in utility—then the action is morally wrong.

Although changes in utility most commonly occur through changes in happiness and health, well-being is also an important component of utility, because it allows the notion of utility to include other sorts of actions which seem morally good, but which don’t produce changes in happiness or health. A good example is learning. Even if learning makes someone neither more nor less happy, and even if it makes them neither more nor less healthy, learning makes them better off, it increases a person’s well-being. Thus utilitarianism can explain why learning is morally good, since it increases utility through the well-being component.

John Stuart Mill formulated the Principle of Utility as follows: an action is right in proportion as it tends to maximize overall utility, and wrong as it tends to produce the reverse. Although the mathematical aspect of utilitarianism may seem a little strange at first, it explains quite a few of our intuitions about morality. Giving 2 meals to a homeless person is better than giving 1 meal—twice as good, according to utilitarianism. Giving 5 dollars to a starving homeless person is a much better action morally than giving 5 dollars to a rich person, because the 5 dollars does the homeless person much more good—it will provide some necessary items the homeless person wouldn’t have otherwise had, but would provide little if anything for the rich person which they didn’t already have. In terms of utility, there is a greater increase in utility to give 5 dollars to the homeless person.

Another feature of utilitarianism to glean from these examples is that the morally right action is the one which tends to maximize utility among the available alternatives. If someone has a choice between two actions, both of which will increase utility, then the morally right action is the one producing the greater increase in utility. Suppose the fire department was unavailable to respond to the fire in our story, and that Valerie could only carry one child out of the house at a time. If there was time to save only one child, the action of saving only one child would be considered morally right by utilitarianism, since the alternative is to save neither child. However, since the fire department did respond, Valerie’s actions were morally wrong according to Utilitarianism, since the alternative of doing nothing would have resulted in both children being rescued. It doesn’t matter to Utilitarianism that Valerie didn’t know the fire department would arrive in time; all that matters is the change in utility compared with the alternatives.

As for Valerie’s alertness, courage, and level-headedness, the utilitarian can say that perhaps she should not be blamed for her morally wrong action, but that does not change the fact that it was morally wrong. She’s the kind of person who normally does things which increase utility, with this tragic exception.

Perhaps the most important feature of Utilitarianism is that if everyone followed it, there would be a state of maximal overall happiness, health, and well being. If we picture a utopian state, we probably picture something a lot like maximal utility. According to Utilitarianism, this is the end result if everyone just does what is morally right—it's built right into the principle of utility. And if we think about it, we probably think that if everyone did what was morally right, we would have a utopia. By contrast, it's possible for everyone to act with intentions every rational person would approve, and yet for things to go awry with enough frequency that the result wouldn't resemble utopia.

Nevertheless, there are some important objections to Utilitarianism. Consider a completely innocent person strolling down the sidewalk past a hospital emergency room. A doctor rushes out and grabs her arm, pricks her finger to do a quick blood test. “O positive!” the doctor cries out. “Follow me,” he says to the innocent passerby. The doctor explains to the passerby that her O positive blood type makes her a universal donor, which is very fortunate, since the doctor has seven patients each needing a vital organ. One needs a heart, another a kidney, two patients each need a lung, another a liver, another bone marrow, and a comatose patient needs the left hemisphere of her brain. By using the passerby for parts, the doctor can save seven lives, at the cost of one! This is a clear case of a morally right action for Utilitarianism, though plainly it is too extreme and morally wrong to sacrifice an innocent passerby for the sake of the seven patients.

Utilitarianism is quite a good theory to use where there are a limited amount of resources, as long as extreme situations such as these can be avoided. For example, despite the emergency room example, much of medical ethics is based on utilitarianism, since the medical community has a limited amount of resources, and their declared aim is to maximize their patients’ health and happiness. Utilitarianism suits these aims of medicine remarkably well—although we also want caring, dedicated doctors with good intentions, even more important is that they bring about good results—we want them to cure us, and keep us healthy.
Similarly, the engineering community has a limited amount of resources. While we want engineers who are caring and dedicated, and who act with good intentions, still more important is that they bring about good results. This is reflected in various engineering codes of ethics by the precept to hold paramount public health, safety, and welfare. Just as for the medical community, utilitarianism suits the aims of the engineering community remarkably well, though it is important to beware of extreme situations, where Utilitarianism gives results which are plainly incorrect.

Ideally, a moral theory would capture both good intentions and good consequences. While this may sound straightforward, it turns out to be very difficult for a theory to incorporate both: notice that Kant and Mill simply disagree over whether Valerie’s actions were morally right. In general, wherever an action is controversial, the two theories will disagree over whether it is morally right. Put another way, if good intentions and maximal utility are required for an action to be morally right, then wherever there is a moral dilemma, there is a good chance that none of the alternatives will be morally right. We could neither fire nor spare the CEO, since firing him does not involve good intentions every rational person would approve—especially the CEO—and sparing him does not maximize utility.

Notice, though, that there is some common ground between these two theories. What both theories do grant about Valerie’s efforts to rescue the children from the fire is that she acted alertly, courageously, responsibly, and with a level head. These are virtues Valerie has. Aristotle’s view is that morally right actions are virtuous actions. This theory, based on virtues, rather than intentions or consequences, is our third moral theory. For Aristotle, a virtue is a mean between extremes, where one extreme is the vice lacking the virtue, and the other extreme is the vice of having the virtue in excess. As an example, consider the virtue of bravery. A person lacking bravery has the vice of cowardice. But too much bravery is actually a vice, also. Being so brave that one does not flee from machine-gun fire is foolishly. This is a vice of excess. Friendliness is a virtue, too. A person who lacks friendliness has the vice of sternness. But too much friendliness is not a good thing, either, for one becomes a social butterfly.

Aristotle points out that what lies in the mean and what lies at the extreme cannot be said without relevant details. The proportion of the virtues it is good for a person to have depends on what gifts they have, and what they do. Firemen and policemen need to have more bravery than accountants or attorneys. While surgeons who perform long surgeries need more concentration and endurance than a pipe fitter, a pipe fitter needs more strength.

What is fundamental to understanding and having virtues is judgment. Using good judgment doesn’t guarantee maximal utility, but if we do have virtues such as being alert, courageous, responsible, and level-headed, tragedies will be rare. Also, that a person uses good judgment does not guarantee that they act with intentions every rational person would approve, but since good judgment takes all relevant things into account, there is little room for criticism from Kant. To act virtuously is to do the right thing for the right reason.

Aristotle argues that while we are all given the capacity to be virtuous, a person needs the proper education and training in order to be virtuous. It takes a good deal of experience and practice to develop virtues, and to refine our judgment so that we judge well, in a way which suits our gifts and circumstances. Circumstances can be critical to deciding which action is virtuous. For example, knowing the temperment of the neighbor and the condition of the truck are critical in deciding whether borrowing the truck is the virtuous action. Only if the neighbor is exceedingly generous and congenial toward you, and there is little risk of the wear and tear breaking down the truck, would it be virtuous to borrow the truck to help your friend move. Otherwise, you must explain to your friend what happened; sometimes things go wrong, and you can’t keep your promise.

Despite its possible advantages over Kant’s theory and Utilitarianism, virtue ethics is hard to implement in professional settings for three reasons. First, since judgment is fundamental to having virtues, applications of virtue ethics in particular cases are bound to be controversial. Second, because the controversies stem from differences in judgment, which is somewhat subjective, controversies will often be difficult to resolve. Obviously, in a professional setting, there must be an effective way to resolve controversies in order to minimize distraction from professional aims and efforts. The third reason is related to the second. Notice that the fundamental question Aristotle is answering is What kind of person should I be? rather than What is it that makes an action morally right? An answer to either question will lead to an answer to the other. But because Aristotle’s question centers on a person, it is difficult to implement into professional settings. It is much more practical, and much less susceptible to controversy, to establish professional guidelines which answer the question, What is it that makes an action morally right, so that controversies can be handled on a case-by-case basis.

### Questions Over Article on Three Moral Theories

1. According to the previous, there are two general ethical questions which we might want answers to. Which of the following is not one of those general ethical questions?
   a. Which actions are the morally right actions?
   b. What is it that makes an action morally right?
   c. When should we keep our promises?

2. According to the presentation, which of the following is the more fundamental ethical question of the two?
   a. Which actions are the morally right actions?
   b. What is it that makes an action morally right?
   c. When should we keep our promises?

3. Which of the following is the central claim of Immanuel Kant’s moral theory?
   a. An action is morally right if it is an act of telling the truth, keeping a promise, or treating others and their property with respect.
   b. An action is morally right if it is done with intentions which every rational person would approve.
   c. An action is right in proportion as it tends to maximize overall utility, and wrong as it tends to produce the reverse.
   d. An action is right if it is virtuous.

4. Which of the following best describes the position of Kant’s theory with regard to lying?
   a. Lying is morally wrong, since an act of telling the truth is always morally right.
   b. Lying is morally wrong, since no rational person wants to be lied to, and because it would lead to the breakdown of communication, which no rational person wants.
   c. Lying is morally wrong if it decreases utility, and morally right if it increases utility.
   d. Lying is morally wrong, since honesty is a virtue, and lying is a vice of absence.

5. Which of the following is the central claim of Utilitarianism?
   a. An action is morally right if it is an act of telling the truth, keeping a promise, or treating others and their property with respect.
   b. An action is morally right if it is done with intentions which every rational person would approve.
   c. An action is right in proportion as it tends to maximize overall utility, and wrong as it tends to produce the reverse.
   d. An action is right if it is virtuous.

6. Which of the following best explains why Valerie’s rescue attempt is morally wrong according to Utilitarianism?
   a. It involved neither telling the truth, nor keeping a promise, nor treating others and their property with respect.
   b. It was not done with intentions which every rational person would approve, especially the parents.
   c. It tended to produce the reverse of maximal utility among the alternative actions, since the children would have been rescued safely had she not attempted to rescue them.
   d. It was done with excess alertness, courage, responsibility, and level-headedness.

7. Which of the following is the central claim of Aristotle’s moral theory?
   a. An action is morally right if it is an act of telling the truth, keeping a promise, or treating others and their property with respect.
   b. An action is morally right if it is done with intentions which every rational person would approve.
   c. An action is right in proportion as it tends to maximize overall utility, and wrong as it tends to produce the reverse.
   d. An action is right if it is virtuous.

8. Which of the following best describes a vice, according to Aristotle?
   a. A vice is the lack of a virtue.
   b. A vice is an excess of a virtue.
   c. A vice is either a deficiency of a virtue, or an excess of a virtue.
   d. A vice is a bad habit we are unable to correct.

9. Which of the three moral theories attributes moral significance to both intentions and consequences?
   a. Kant’s theory
   b. Utilitarianism
   c. Aristotle’s Theory
   d. None of the above

10. Which of the three moral theories is best suited, for reasons of practicality, where there are a limited amount of resources to be distributed in a given community?
    a. Kant’s Theory
    b. Utilitarianism
    c. Aristotle’s Theory
    d. None of the above
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EMPLOYMENT – QUESTIONING ABILITY OF FORMER EMPLOYER
TO MEET CLIENT’S EXPECTATIONS

NSPE-BER Case No. 01-1

Facts:

Engineer A, a professional engineer working for a small private practice firm, leaves the employment of Firm X. Engineer A had represented that he was going to start his own one-person consulting firm, Firm Y, and that he would not be in the position of competing with Firm X.

A month after Engineer A departs from Firm X, Engineer B, a principal in Firm X learns that Engineer A has contacted one of Firm X’s employees, Engineer C, and offered her a position with Firm Y.

Soon thereafter, Engineer B learns that Engineer A has contacted Firm X’s clients and is making representations that because Engineer C is going to be leaving Firm X to work for Firm Y, Firm X will be “hard pressed” to perform successfully on its projects and that Firm X’s clients should hire Firm Y to perform engineering services.

Questions:

Question 1: Was it ethical for Engineer A to offer a position to Engineer C?

Question 2: Was it ethical for Engineer A to make representations to Firm X’s clients that because Engineer C is going to be leaving Firm X to work for Firm Y, Firm X will be “hard pressed” to perform successfully on its projects and that the clients should hire Firm Y to perform engineering services?
CONFLICT OF INTEREST: THIRD PARTY DEVELOPER

NSPE-BER Case No. 01-2

Facts:
A developer, Mall Dev, has approached a town requesting approval to construct a development on a vacant site in Niceville. Based on the size of the development, Niceville is requesting that an environmental impact statement be prepared that will address traffic operations, as well as other issues.

Niceville requests an outside consultant, Engineer A, to assist the town in scoping out the necessary traffic analyses and to review and advise Niceville on possible traffic impacts of the proposed development. The development will be both retail and offices and will contain a supermarket.

The consultant, Engineer A, is also assisting other jurisdictions in review of proposals by Mall Dev. Engineer A has disclosed to the town all relationships, if any, with the proposed developer, Mall Dev with announced tenants, and with other customers that develop sites for retail development. Niceville is satisfied that there is no conflict of interest.

More specifically, Engineer A is not currently representing any other developers in the town, but in the past has prepared traffic impact studies for other developers on projects concerning other developments constructed in Niceville. Engineer A is currently providing traffic impact studies to other developers in other jurisdictions, as well as services to Mall Dev. These have all been disclosed to Niceville.

Mall Dev, however, has informed Niceville that it believes the use of the consultant Engineer A is a conflict of interest and breaches the code of professional ethics. Mall Dev bases its belief on the fact that Engineer A has worked in the past, and is currently working for, other developers who compete for the same tenants Mall Dev tries to attract to its developments.

Questions:
1. Would Engineer A’s work for the Niceville constitute a conflict of interest?
2. Was it appropriate for Mall Dev to raise an ethical issue relating to Engineer A’s actions?

USE OF P.E. DESIGNATION – NOT LICENSED IN STATE IN WHICH COMPLAINT IS FILED

NSPE-BER Case No. 01-3

Facts:
Engineer A is a safety engineer for a federal agency. He is responsible for independently overseeing the proper implementation of worker and nuclear safety programs in the agency’s facilities, which are located in many different states, including the state in which Engineer A is licensed, State Y. Engineer A is not required to be licensed by the federal agency, but has become licensed because of his personal commitment to the engineering profession.

Engineer A has never used his seal in the course of his employment. When Engineer A moves to State Z, he does not obtain an engineering license in State Z. Engineer A reads a newspaper account about LMN Engineering, a subcontractor to the federal agency in which he works, having a conflict of interest with the agency. Engineer A, acting on his ethical obligation to report violations of the NSPE Code of Ethics to a public authority, files a complaint against LMN Engineering. In the text of the complaint, Engineer A indicates that he is licensed in State Y but not licensed in State Z and signs the letter “Engineer A, P.E.”

Engineer A is thereafter notified by the State Z engineering licensure board that his use of the title “P.E.” in the letter is inappropriate because he is not licensed in State Z.

Questions:
1. Was it ethical for Engineer A to indicate in a State Z complaint letter, in which he had already indicated that he was not licensed in State Z, that he was a professional engineer?
2. Did Engineer A have an ethical obligation under the NSPE Code of Ethics to file a complaint in a state in which he was not licensed?
PATENTS – DISPUTE OVER RIGHT TO SPECIFY  
NSPE-BER Case No. 01-4

Facts:
Engineer A, a structural engineer, designs structural systems for large developers on hotel projects. Developer B would like to use a unique flooring system, but the system is patented by Inventor C, who is a professional engineer. Developer B contacts Attorney D, who tells Developer B that Inventor C has a legitimate patent and recommends that Developer B negotiate with Inventor C to obtain a license for Inventor C’s patent. Developer B enters into negotiations with Inventor C, but the negotiations fail. Thereafter, Developer B hires Attorney E, who reviews the patent and indicates that he disagrees with Attorney D, and also indicates that, in his professional view, there is a genuine dispute as to the legitimacy of Inventor C’s patent. Developer B tells Engineer A that he wants Engineer A to proceed with the project and have Engineer A specify the flooring system into the structural design of the project.

Question:
Would it be ethical for Engineer A to proceed with the project and reference the flooring system of the project’s structural design?

CONFLICT OF INTEREST -- UTILITY AUDITS FOR CITY  
NSPE-BER Case No. 01-5

Facts:
Engineer A receives a “Request for Qualifications (RFQ)” from City X for the review of unbilled and mis-billed water and wastewater service records. One paragraph of the RFQ reads as follows: “The consultant shall be entitled to receive X% of increased revenues generated. If the consultant fails to identify and document unbilled or mis-billed water and wastewater sewer service records, the City shall be under no obligation to compensate the consultant.”

Question:
Would it be ethical for Engineer A to enter into a contract under the circumstances described?

CONFIDENTIALITY –  
RECORDS RELATING TO SERVICES TO FORMER CLIENT  
NSPE-BER Case No. 01-6

Facts:
Several years ago Engineer A, a mechanical engineer, consulted for Company A, a pressure vessel manufacturer, on a specific pressure vessel problem relating to the design of a boiler system. Engineer A’s work focused on specific design and manufacturing defects that caused deterioration of the boiler system. Engineer A completed his work and was paid for his services.

Ten years later, Engineer A was retained by, Attorney X, plaintiff in a case involving the fatal explosion of a recently designed and manufactured pressure vessel at a facility previously owned by Engineer A’s former client, Company A. The facility was sold to Company B seven years before the explosion. The litigation does not involve any of the issues related to the services Engineer A provided to Company A ten years earlier. The defendant’s attorney discovered through Engineer A’s deposition and statements relating to his professional experience that Engineer A had worked for Company A on a pressure vessel problem. Engineer A explains to the defendant’s attorney that he is not relying upon any of his prior work for Company A in this case. Nevertheless, the defendant’s attorney requests that Engineer A provide his files from the previous work performed for Company A.

Question:
Would it be ethical for Engineer A to voluntarily release the files to defense counsel?
CONFLICT OF INTEREST – PRIVATIZATION OF PLAN REVIEWS
NSPE-BER Case No. 01-7

Facts:
A controversial new ordinance is developed by a local county Board of Supervisors to give property owners the option of hiring private engineers and architects to perform plan reviews and inspections normally performed by a building department. The ordinance has stirred debate about who in the design and construction process is responsible for the code compliance of buildings. According to county officials, the “affidavit ordinance” is intended to help the county encourage new development by streamlining the permitting process without compromising public safety. The ordinance states that the private plan reviewer or inspector must be a licensed engineer or architect other than the design professional of record, and is required to carry liability insurance, without a deductible, of at least $1 million for residential projects and $2 million for commercial projects. The ordinance also calls for an audit of 20% of all privately certified plans and 50% of all private inspections. Contractors have criticized the ordinance, claiming that it will encourage private plan reviewers to take less personal responsibility. Others have criticized the law because it will create a conflict of interest for the plan reviewers who are selected and paid by the property owners. It is recognized that most of the county plan reviews will still be performed by county plan reviewers and that the program is intended as an experiment.

Question:
Would it be ethical for engineers to participate in a private plan review under the circumstances described?

ASSOCIATING WITH A FIRM NOT AUTHORIZED TO PRACTICE
NSPE-BER Case No. 01-8

Facts:
Engineer A is employed by Firm Y in State X. Engineer B, the President of Firm Y, passes away in July 2000. His widow, Widow C, a non-engineer, was the only other named corporate officer in Firm Y. At the time of Engineer B’s death, Engineer A is the only other professional engineer in Firm Y. Following discussions with Widow C, Engineer A tries to purchase Firm Y from Widow C. However, negotiations break down and Engineer A decides to start his own firm in October 2000.

Following a period of time, Widow C decides to run the engineering firm, Firm Y. As an “interim measure,” Engineer D, a personal friend of the deceased Engineer B, with a separate full-time practice, agrees to advise and help Widow C through a “transition period.” A year passes and there is still no professional engineer within the structure of Firm Y who is in responsible charge of engineering work. Firm Y continues to perform engineering services and take on new clients and new work through the limited advice of Engineer D and two graduate engineer employees. Under the laws of State X, a professional engineer employee must be in responsible charge of engineering work performed by an engineering company.

Questions:
Question 1. What are Engineer A and Engineer D’s ethical obligations under the described facts?

Question 2. Was it ethical for Engineer D to assist Widow C through an undefined “transition period” and thereafter provide advice to Widow C to permit Firm Y to continue to perform engineering services?

REFERENCE – QUID PRO QUO
NSPE-BER Case No. 01-9

Facts:
Engineer A is licensed in State A, and State B and would like to become licensed in State C. State C requires a recommendation of three licensed professional engineers licensed in any state. Because Engineer A has worked for many years in a company with no other licensed engineers, Engineer A has not had much exposure to licensed professional engineers. Engineer A is able to obtain the recommendations of two licensed engineers. His colleague, Engineer B, was licensed but has allowed his license to lapse. Engineer B knows Engineer A well and respects Engineer A’s professional judgment. Engineer A offers to pay Engineer B to have Engineer B’s license reinstated with the understanding that he will prepare a recommendation for Engineer A.

Question:
Was it ethical for Engineer A to offer to pay Engineer B to have Engineer B’s license reinstated with the understanding that Engineer B will prepare a recommendation for Engineer A?
EMPLOYMENT – INFORMATION GAINED FROM ABET VISITATION
NSPE-BER Case No. 01-12

Facts:
Engineer A is an engineering educator who serves as an evaluator on an ABET visitation team reviewing an engineering program at State X University. Due to a pending decision by Engineer B to depart for a position at another university, it is possible that State X University may have an opening in the position of chair of its chemical engineering department. Because it is unsure of Engineer B’s decision, State X University has not advertised or announced the opening. Engineer A visits State X University with an ABET visitation team in October. During the ABET visit and interviews with the dean, department chairs, and engineering faculty, it becomes apparent to Engineer A and others on the ABET team that Engineer B might depart and a chemical engineering chair position at State X University might open. She completes her evaluation and has no further influence on the report or the final action by ABET. In June, Engineer A formally learns of the chair position opening, applies for the position, is selected by a search committee, and accepts the appointment as chair of the State X University chemical engineering department.

Question:
Was it ethical for Engineer A to apply for the position of chair at State X University?

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www.niee.org

To view the current NSPE Code of Ethics, see:
http://www.nspe.org/ethics/eh1-code.asp