

**Biennial Evaluation  
of the  
Technology Workforce Development  
Grants Program**

A report responding to  
Texas Higher Education Code Chapter 51,  
Subchapter X, Section § 51.860

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March 2007

# Evaluation of the Technology Workforce Development Grants Program

## Program Evaluation

Austin, Texas  
March 5 and 6, 2007

**Eileen Collins, PhD**  
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**Caroline Wardle, PhD**

## Overview

The Technology Workforce Development (TWD) grant program was created to increase the number of engineering and computer science graduates in the state and to increase collaborations involving higher education institutions, engineering and computer science departments, and private companies in Texas. This report presents the observations and recommendations of the third biennial, external program evaluation committee. The committee found that the TWD program is an excellent program and is on track with respect to its legislative purposes. The committee recommends continuation of the program, maintaining the current program direction, and cooperation among state, industry, and educational institutions to assure the long-term sustainability of projects.

## Background

The 77th Texas Legislature passed the *Technology Workforce Development Act* (Senate Bill 353; Texas Education Code Chapter 51, Subchapter X, Technology Workforce Development, Sections 51.851-51.860) in 2001 and established the *Technology Workforce Development Grants Program*. The two purposes of this act are to increase the number of engineering and computer science graduates in the state and to increase collaborations involving higher education institutions, engineering and computer science departments, and private companies in Texas.

The act also laid the foundation for the *Texas Engineering and Technical Consortium (TETC)*, a non-profit organization of private industry and academic engineering and computer science departments. Under the law, the state may appropriate matching funds to industry and federal contributions made for the purposes of the Technology Workforce Development Act. The private industry/state government partnership is a unique feature of this program.

The enabling legislation requires the review of this program by an external expert evaluation committee on a biennial basis, thereby prompting this third review. At the time of the review, all award cycles, TWD 2002, TWD 2003, TWD 2005, and TWD 2006 "TETC-TYT," were still active.

## Evaluation Procedure

The Texas Higher Education Coordinating Board staff provided the evaluation committee with an extensive package of background material for their site visit in Austin. During the visit, the

committee met with groups of project leaders, program administrators, and industry and government representatives. The visit started with a briefing by Coordinating Board staff on the administration of the program. At this time, the committee also met with John Shelene, Executive Director of TETC and Whitney Williams Strauss, TETC Business Manager.

During the first morning of the review, the committee met first with a group of TETC executives from industry and academia and with representatives of the Coordinating Board's TWD Grants Program Advisory Committee. During the day the committee visited with project leaders and department chairs from both electrical engineering and computer science departments. The external review was concurrent with the second annual Best Practices Conference for the program. University representatives volunteered to meet individual members of the committee during 20 minutes consultations. During the second day the evaluation committee held a speaker conference call with the Chief of Staff of State Representative McCall's office.

### **General Comments**

The Technology Workforce Development (TWD) Grants Program is an excellent program, effectively leveraging relatively modest funds to support creative and valuable educational and outreach activities in the State of Texas. The external review committee was impressed with the strong commitment of the grantees; the breadth, depth, and creativity of the projects; and the consistent use of Best Practices across all of the universities involved. The TWD program is on track with respect to its legislated purpose of increasing engineering and computer science graduates, and of increasing collaboration, both between different campuses and between universities and industry.

In addition to the increase in recruiting and retention of engineering and computer science students, another very positive aspect of this program, that impressed the review committee, was the strategic reach of university programs that sought out high school and middle school students, teachers, and counselors to improve their understanding of engineering and computer science and of the real need for these skills in Texas industry. These activities can be expected to have a positive impact on the Texas economy for the next decade.

Finally, the review committee and the grantees were impressed with the support provided by Linda Domelsmith and Reinold Cornelius. The grantees appreciated the open lines of communication, quick turnaround, assistance with administrative requirements, and other help Linda and Reinold provided to bring together the universities, corporations, and government agencies.

Uncertain and unstable funding is the greatest risk to the continued success of the TWD program. A steady funding stream should be a high priority for the future.

### **Level of Participation by Eligible Private or Independent Institutions in TWD Program**

There are four eligible private or independent engineering and computer science institutions: Baylor University, Rice University, St. Mary's University of San Antonio, and Southern Methodist University. All four institutions have received at least one TWD grant since the program's inception.

## **Specific Observations**

### Prior TWD Evaluations

Prior to this 2007 evaluation, there have been two earlier evaluations, the first in 2003 and the second in 2005. The review committee examined the two earlier reports and asked TETC staff to describe the actions taken in response to these recommendations. Written responses were produced and the most recent response, to the 2005 evaluation, is included in Appendix C.

The review committee found that TETC staff were responsive to these earlier recommendations, and have made and continue to make appropriate changes to the TWD program and procedures, subject to budgetary and legislative constraints.

### Funding

TWD has done an excellent job of directing funds to an important range of projects -- multiple approaches for increasing recruitment, retention, and graduation of engineering and CS graduates, as well as projects to serve specific segments of the Texas student population, such as minorities, women, low-income students, and those with full-time jobs. Generally, grantees have been exceedingly successful in leveraging the TWD seed funds. Sustained TWD funding is needed to continue diffusion of best practice throughout the state. It is unfortunate and probably unavoidable that the complex and interlocking set of federal and state mandates increase grantees' cost of implementation, despite the efforts of the TWD administrators to simplify procedures as much as possible within these constraints.

### Metrics

Assessment of project outcomes is important for effective management and for accountability to sponsors and the public. Quantitative evaluation is inherently challenging for projects such as these where multiple forces interact and contribute to the intended goals. Grantees have been doing an excellent job of developing measures for their programs. The measures include changes in the numbers of students entering, continuing, and graduating; interviews of students before and after a particular program or assistive technique; and surveys of students about the effectiveness of new teaching and mentoring tools. Grantees have supplemented their quantitative measures with useful narrative assessment.

### Best Practice

The external review was held concurrently with the second annual Best Practices Conference for the TWD program. This allowed the review committee to visit with project leaders and department chairs from both electrical engineering and computer science departments, and to see first hand, the enthusiasm and commitment of these individuals to their TWD projects.

The program administrators and grantees have done an excellent job of developing, refining, and applying best practice principles. The value of the Best Practice Conferences and of the institutional collaboration fostered by the program is recognized by both the grantees and the review committee. An important strength of TWD is the flexibility provided by the program so that grantees can be (and have been) creative and innovative in applying the best practice to their particular students, institutions, and context.

## Project Sustainability

The strategic vision embodied in this initiative means that many of the projects, particularly K-12, have a very long lifetime. Hence there is a need to address how to sustain individual projects once their TWD funding has ended. The review committee regards this as a joint responsibility of the academic institutions, the state, and the industry. Some projects can, and already have, reached a steady state and now require a lower level of funding than initially required. Others, for a variety of reasons (e.g., dynamic shifts in the student population, industry needs, technical state of the art; or constraints on existing funding mechanisms) will need more help to sustain them.

## **Specific Recommendations**

This is the third biennial evaluation by an external review committee of the TWD Grants Program. The program is on track. In view of the impressive variety and quality of the funded projects, the commitment of the academic institutions and individual grantees, and the continued excellence of the program management, the committee members see no need for any major changes to the program. Consequently, the recommendations that follow are designed to maintain the strengths of the current program. In particular, the committee recommends continued:

1. Funding for the TWD program.
2. Cooperation among state, industry, and educational institutions to obtain multiple funding sources, with the aim of assuring the long term sustainability of appropriate projects and the provision of a more stable funding stream for TWD.
3. Maintenance of the current program direction.
4. Support for the variety of tools and techniques used (Best Practices).
5. Use of the Best Practice conferences and other mechanisms for exchanging ideas and experiences.
6. Flexibility to allow innovative application of current Best Practices in the varied contexts within which grantees function.
7. Support for selected innovative projects that will improve current Best Practices or become Best Practices of the future.
8. Encouragement for eligible engineering and computer science institutions to collaborate on projects (breadth) as well as with schools and school districts (depth).

## Appendix A

### **2006 Technology Workforce Development Grants Program Evaluation Committee**

**Dr. Eileen L. Collins**, Affiliated Fellow at the Center for Women and Work in the School of Management and Labor Relations, Rutgers University, New Jersey. Her research interests are the preparation of girls and minority students for science and engineering.

Dr. Collins previously was Senior Coordinator and Manager for Assessment Studies at the National Science Foundation's Division of Science Resources Statistics (1995 to 2003) and in 1994 Acting Assistant Director for Social and Behavioral Sciences for the Office of Science and Technology Policy at the Executive Office of the President of the United States.

Dr. Collins holds a Ph.D., 1975, and M.A. in economics from the University of Wisconsin-Madison and a B.A. in economics from Bryn Mawr College. In 1994 she received a Certificate of Appreciation in Recognition of Extraordinary Service to the United States of America from the White House Office of Science and Technology Policy.

**Dr. Alfred J. Reich**, Manager of Resolution Enhancement Technology at Freescale Semiconductor, Inc., Austin, Texas. Dr. Reich brings industry perspective to the committee.

From 1995 to 2004 Dr. Reich was the manager of Resolution Enhancement Technology and Senior Fellow of the Technical Staff at Motorola. From 1987 until 1995 Dr. Reich was a principal investigator and senior engineer at Lockheed Martin Corporation and, from 1980 to 1987, a senior engineer at McDonnell Douglas Astronautics. He has been a software engineer for 35 years, has worked in semiconductor design and manufacture for 11 years and has over 20 years of technical leadership experience. Dr. Reich is highly published and holds seven patents.

Dr. Reich earned a Ph.D in mathematics from Texas Tech University in 1980, and a M.A. and B.A in mathematics from the University of Utah.

**Dr. Caroline Wardle**, Research Professor of Computer Science at George Washington University, Washington D.C. and Visiting Professor of Computer Science at Queen Mary, University of London. Her research explores information technology workforce issues, women in information technology, and research ethics in science and engineering.

Dr. Wardle previously held the position of Senior Science Advisor (2002-2006) and Deputy Division Director (1995-2002) and Program Director (1990-1995) in the Computer and Information Science and Engineering Directorate (CISE) at the National Science Foundation. Before that she founded and headed the Department of Computer Science at Boston University and was a Dean at the Wang Institute of Graduate Studies in Tyngsboro, Massachusetts. Her previous research interests have spanned theoretical physics, computer graphics, programming languages, software engineering, and information systems.

Dr. Wardle received a Ph.D. in mathematical physics in 1970 and a B.Sc. in mathematics, both from Royal Holloway, University of London.

## **Appendix B**

### External Evaluation Materials

*Material provided for review included:*

- Schedule
  - Program schedule
  - Break-out session for talks with project leaders
  - Brief review team biographies
  - Maps of conference and review locations
- Background on Technology Workforce Development (TWD) Grants Program
  - Overview of Texas Engineering and Technical Consortium (TETC) organizations and committees
  - TETC industry member, academic member institutions, and TETC Executive Committee roster
  - Press release: TETC Endorses Governor's Higher Education Plan (2 March, 2007)
  - Overview of TWD grants programs, program history, strategic principles
  - TWD Grants Program Advisory Committee roster
  - TETC and TWD organizational chart
  - TWD statute, Coordinating Board rules on TWD, TETC bylaws, and recommendations from the first and second external evaluation committees
- Grants Awarded
  - TWD grants statistics
  - Grant announcements for TWD 2002, TWD 2003, TWD 2005, TWD 2006
  - Information on grant periods, funding sources, and funding distribution time tables
- Benefits and Metrics
  - Listing of TWD benefits
  - TWD student tracking roster
  - TWD publication list
  - Information on All Across Texas internship program
- Budget
  - TWD budget overview
- Annual Reports
  - Fifth Annual Report, October 2006
  - Fourth Annual Report, October 2005
- Best Practices Conferences
  - Best Practices Conference 2007 agenda
  - Best Practices Conference 2006 summary
  - Best Practices Conference 2006 discussion papers

- Biennial Evaluations
  - Evaluation of the TWD Grants Program, March 2003, including staff response on progress on recommendations from the first external review
  - Evaluation of the TWD Grants Program, January 2005, including staff response on progress on recommendations from the second external review
  - Proposal review team exit interview comments from the TWD 2005 competition (2 April 2005)
  
- Program Announcements
  - Program Announcement TWD 2006, including grants conditions and evaluation criteria
  - Program Announcement TWD 2005, including grants conditions and evaluation criteria

## Appendix C

### Progress on Recommendations from the Second External Review (January 2005) of the Technology Workforce Development Grants Program

CB staff, March 5, 2007

#### A. Continuance

- *It is recommended that the program be continued at a funding level no less than that initially proposed, with a strong consideration for increased funding if budgetary constraints permit.*

Funding of the two following grant program cycles was \$3.6 million for TWD 2005 and \$2.8 million dollars for TWD 2006 "TETC-TYT." The average funding per grant remained approximately level.

#### B. Operations

Below are 10 recommendations to further improve the effectiveness of the Technology Workforce Development Grants Program:

1. ***Document effective best practices in a searchable knowledge base that can be accessed by all potential participants.*** *This will facilitate the widespread implementation and adoption of proven methods throughout the state. Note that some practices may be more (or less) effective in certain types of environments; this information should be captured in the knowledge base such that appropriate methods are selected.*

The Coordinating Board (CB) or TETC put into place Best Practices meetings after this review, but have not yet created a "searchable knowledge base" of best practices. However the CB lists all project summaries of its TWD grants through links in a table format and published on-line all project leader annual reports. The CB also published in hard copy and posted on the web abstracts of best practices based through committee selection and published a distilled summary of a 10 best practices list.

2. ***Support outreach projects directed at students in middle school.*** *By the time students enter high school, they are often already behind in the preparatory courses required for engineering degrees. For example, if a student does not take Algebra I in 8th grade, he so she will not have the background required for the necessary high school mathematics courses. This inadequate education can seem an insurmountable obstacle to the young high school student. Additionally, students' perceptions about engineering and computer science are frequently formed prior to high school; early intervention is the key to increased recruitment.*

The newest TWD grant cycle from 2006, "TETC-TYT," requires the age of target students to fall between 14 to 21 years. This represents the youngest age targeted ever by TWD grants. TWD grants go to higher education educators who have to undergo a considerable learning curve to address even high school student abilities and psychology ("speaking the high school students' language"). However, most if not all TETC companies are involved with support of middle school outreach programs, such as the First Lego competition.

- 3. Encourage projects that engage university Education Departments in cooperative initiatives with Engineering and Computer Science Departments.** *This is a golden opportunity to influence and shape future teachers, who in turn will help recruit future engineers and scientists. Projects that involve active collaborative participation of both Engineering/Computer Science and Education Departments should be encouraged.*

One funded grant at the University of Texas at El Paso took up this opportunity through a collaboration of Department of Computer Science and the College of Education.

- 4. Fund projects fully, at their outset.** *The incremental funding model had an overall negative impact on the success of the program. Projects should not be supported unless they receive full funding, on schedule. If additional funding is to be provided based on a project achieving certain milestones, that additional funding should be held in reserve at the outset.*

The economic downturn for the state made funding insecure at the beginning of the grants program. The funding of the last two cycles has been more predictable and stable. Both TWD 2005 and TWD 2006 grant cycles were limited to awarding projects through cash available at-the-time and federal funds immediately available for draw-down.

- 5. Expand participation in the TETC intern (jobs) database (All Across Texas, AAT) to include any interested engineering and computer science student or graduate; open the database to all interested businesses willing to pay the required fee.** *Currently there is an intern database (AAT) restricted to juniors and seniors who have achieved a specified grade-point average; the database can be accessed only by TETC member corporations. Currently there is no graduate database. Retention should be improved by allowing freshmen and sophomores to participate in the intern database, acquiring earlier exposure to the true nature of engineering/computer science careers. Opening the database to non-TETC member corporations has two effects: it increases the number of potential opportunities for the students, and it generates additional revenue for the program. The fee for non-TETC member corporations might be based on number of searches or other criteria. Further, expanding the database to include graduates of participant universities will encourage Texas graduating engineers and computer scientists to stay in Texas, as well as assist Texas corporations in hiring eligible graduates.*

The internship effort has not taken off. The lack of State appropriation for the 2006/2007 biennium led industry to avoid tabulating internships above the 2003 level because there was no prospect of State funds. Industry human resources departments also are hesitant to branch out to new modes of operation, i.e. to work with the All Across Texas data base. The newest TWD cycle, "TETC-TYT," calls for internship programs for students of age 14 to 21 years and the next (first) annual report will show to what extent departments are successful in orchestrating such internships. TETC members (industry, academic, staff) still recognize the tremendous value of internships and the AAT effort might be revived as a focus for TETC in the coming years.

- 6. Require meaningful measurements of progress throughout a project's lifecycle, and require progress reporting for previous projects in all requests for new funding.** *Documentation of a project's progress throughout its lifecycle is beneficial on many levels: it provides some degree of return-on-investment visibility to shareholders, it sets expectations for future related projects, and it guides decisions on future proposals. Note that the current enrollment metrics may be misleading progress indicators for certain majors – particularly in the Computer Science discipline, where the "progressing" requirement of two semesters of*

*science is inconsistent with the progress of Computer Science students, who often take these courses in their senior year because they are not prerequisites for major courses (as they are in engineering).*

The TWD 2005 evaluation criteria for project selection called for evaluation of the “mechanism for self-assessment” and the evaluation criteria for the TWD 2006 selection called for both “mechanism for self-assessment or third-party assessment” and for “criteria for measuring qualitative and quantifiable success for all strategies.” Neither program announcements prescribe a uniform measuring system and left the evaluation of the assessment plan up to the review team for project ranking.

In May 2006 the TWD Advisory Committee simplified the roster definition, taking out course requirements and basing the roster categories mainly on student level “freshman,” “sophomore,” “junior,” and “senior.” The Committee deemed the previous course requirements included in the definitions too prohibitively complicated and confusing, especially at the time when the program was opened to all engineering departments.

- 7. *Generally require that sustainability be addressed by all proposals. In particular, require that sustainability be addressed by proposals seeking to increase retention, and require that continuity be addressed by recruitment proposals that actively engage educators.*** *Proposals directed at increasing retention should address how they will continue to operate following the termination of program funding. A viable sustainability program is not required for proposal acceptance, but at a minimum it must be addressed – the Project Leader should be required at least to put some thought into future, non-program funding. Projects that actively engage educators in an effort to recruit new students should not suddenly terminate when funding expires; some form of continuity following the cessation of program funding is required to ensure future participation and long-term impact. Proposals that actively engage educators should address a continuity program to ensure educators are not left “high and dry.”*

Both evaluation criteria for the TWD 2005 and TWD 2006 grant cycle called for the evaluation of “quantitative goals for self-sustainability” and “optional letter of support by the dean.”

The program announcements make clear that the grants program “provides seed money that will enable institutions to expand enrollments ... (and) larger enrollments will result in increased legislative formula funding...” Grant conditions require “grantee institution (to) agree to pass on to the appropriate college or department any increased formula funding that results from increased undergraduate enrollment in engineering or computer science programs.” This requirement comes from statute:

§ 51.857

“The coordinating board may award a grant under this section only to fund a new project or activity or the expansion or enhancement of an existing project or activity. The coordinating board may not award a grant under this section to replace current funding for an existing project or activity.”

- 8. *Encourage both experimentation with innovative ideas and the widespread adoption of proven best practices.*** *The 75/25 funding guideline, where approximately 75 percent of the funds is allocated to best practices and approximately 25 percent of the funds is allocated to new ideas, is a good approach. Grants for innovative, unproven ideas should*

*normally be small compared to those for best practices. This will provide fertile ground for inquiry while limiting financial risk.*

The 75/25 model was utilized for the TWD 2005 grant cycle, which funded separately best practices projects and innovative projects. The TWD 2006 cycle could not follow this model because it had three program components, prescribed by funding source (Texas Workforce Commission and Department of Labor).

9. ***Continue providing assistance for the writing of project proposals.*** *It is an unfortunate reality that poorly expressed brilliant ideas may be overlooked in favor of well-written lesser ideas. Of course, an idea without proper execution has limited value. Proposal writing workshops, early feedback prior to submission, and models of successful proposals are all useful techniques to improve proposal presentation. Workshops and feedback should be continued, but the addition of providing a few models of not only successful, but also clearly thought out and well-written proposals would benefit all potential proposal writers.*

TETC and the Coordinating Board have not been able to hold additional grant writing workshops than those mentioned in the response to the recommendations of the first evaluation team. The CB also does not publish entire proposals, only project summaries. The CB however encourages individual project leaders to exchange proposals among each other on a voluntary basis.

10. ***Capture the recommendations from the Proposal Review Panels in a timely fashion.*** *The Proposal Review Panels provided useful insight into the program, but sufficient time had passed since they performed their review that memories had grown hazy. The Proposal Review Panels provided an exit interview immediately upon completion of their task; their recommendations from this exit interview should be documented.*

This incident was specific to the second proposal review process. There is no continuing concern. Coordinating Board staff provides an overview of the proposal evaluation process, including any comments and recommendations made by review panels, to the TWD Advisory Committee at its quarterly meeting immediately following proposal review. Information provided by the review panels, the advisory committee, and project leaders is used to improve future program announcements, program guidelines, evaluation criteria, and the review process.

## Appendix D

### Schedules

#### Technology Workforce Development Grants Program Evaluation

##### **Sunday, March 4 2007**

- 6:00 pm Reinold Cornelius meets Caroline Wardle and Eileen Collins in the Hilton hotel lobby.
- 6:30 Alfred Reich joins team for Dinner at Louis 106 in Austin with Linda Domelsmith, Reinold, and John Shellene (TETC Executive Director) and Whitney Williams Strauss (TETC Business Manager).

##### **Monday, March 5 2007**

- 8:00 am Reinold meets Caroline and Eileen in hotel lobby and drives to conference center.
- 8:20 am Breakfast meeting with Ray Almgren (National Instruments, TETC chair), Dan Marcek (HP, TETC vice chair), Brad Beavers (Intel, TETC secretary, TWD Advisory Committee), John Shellene, and Dean Milton Bryant (Prairie View A&M University, TETC executive committee member). Other TETC executive committee members may join.
- 9:20 am Team joins pre-conference "Meet and Greet."
- 10:00 am Team joins conference for Welcome and Introductions and listens to Keynote Address of Best Practices Meeting
- 11:15 am Program evaluation team confers in private
- 12:15 pm Lunch – Team is introduced during the TETC Advisory Committee Annual Meeting.
- 1:30 pm Team listens to session II of meeting (State Initiatives)
- 2:45 pm From 2:45 pm until 4:50 pm, break-out session during which each program evaluator meets for 20 minutes with delegations from different institutions and programs.
- 5:00 pm Evening Break
- 5:30 pm Team joins conference for legislative reception at Capitol Extension: Legislative Conference Center

##### **Tuesday, March 6 2007**

- 7:30 am Breakfast meeting at the Hilton Hotel with invitees from the Governor's Office, the Lieutenant Governor's Office, the Speaker's Office, the Senate Education Committee, the Senate Finance Committee, the House Appropriations and the House Higher Education Committees, the Legislative Budget Board, and the offices of Texas Senator Rodney Ellis and Representative Brian McCall.)
- 10:00 am 10:00 am until 10:45 pm, break-out session during which each program evaluator meets for 20 minutes with delegations from different institutions and programs.
- 10:45 am Program evaluation team confers in private
- 11:45 am Lunch Break – Evaluation team shares preliminary conclusions with conference.
- 1:00 pm Team listens to session VI of meeting ("Best Practices in Consortium Building) and the Capstone Discussion.
- 3:30 pm Adjourn

## Program Review Break-Out Sessions

**Monday, March 5 2007**

	Caroline Wardle	Eileen Collins	Alfred Reich
2:45-3:05 pm	<b>Texas Tech U.</b> ( <i>Mohammad Saed, Brian Nutter, Mary Baker, Richard Gale</i> )	<b>Baylor U.</b> <b>St. Mary's U.</b> <b>TX State U.-San Marcos</b> ( <i>Moonis Ali</i> )	<b>U. of North Texas</b> <b>TX A&amp;M U.-Corpus Christi</b> ( <i>John Fernandez</i> )
3:10-3:30 pm	<b>Prairie View A&amp;M U.</b> ( <i>John Attia, Akhtar Lodgher</i> )	<b>Lamar U.</b>	<b>TX A&amp;M U.-Kingsville</b> ( <i>Lifford McLauchlan</i> ) <b>UT-Pan American</b>
3:35-3:55 pm	<b>UT-Arlington</b> ( <i>Manfred Huber</i> ) <b>UT-Dallas</b> ( <i>Simeon Ntafos</i> )	<b>Texas Woman's U.</b> <b>UT-EI Paso</b> ( <i>Benjamin Flores, Steven Roach</i> )	<b>TX A&amp;M U.-Texarkana</b> ( <i>Doug Green, Stamos Karamouzis</i> )
4:00-4:20 pm		<b>U. Houston-Clear Lake</b> ( <i>Sadegh Davari</i> )	<b>Tarleton State U.</b> <b>UT-Tyler</b> ( <i>Hassan El-Kishky, Mukul Shirvaikar</i> )
4:30-4:50 pm	<b>UT-San Antonio</b> ( <i>Mehdi Shadaram</i> )	<b>U. of Houston</b> ( <i>Fritz Claydon, Julie Trenor, Jaspal Subhlok</i> )	<b>Texas A&amp;M U.</b> ( <i>Chanan Singh, Pete Petersen</i> )

**Tuesday, March 6 2007**

	Caroline Wardle	Eileen Collins	Alfred Reich
10:00 – 10:20	<b>UT-Austin</b> ( <i>Tony Ambler, Greg Lavender</i> )	<b>Southern Methodist U.</b> ( <i>Scott Douglas</i> ) <b>U. Houston-Victoria</b> ( <i>Meledath Damodaran</i> )	<b>UT-San Antonio</b> ( <i>Kay Robbins</i> )
10:25 – 10:45	<i>Team will call Sean Cunningham, Chief of Staff, Representative McCall's Office</i>		

# ***Best Practices Conference 2007***

Thompson Conference Center, The University of Texas at Austin

## **Monday, March 5, 2007**

- 9:00 am Check-in, Meet & Greet (Lobby) – Complimentary coffee, tea, juice, pastry
- 9:30 am Pre-Conference Corporate Reception
- 10:00 am Welcome and Introductions
- 10:15 am Keynote Address – The Wright State University Model for Engineering Mathematics Education: Increasing Student Retention, Motivation and Success in Engineering
- 11:15 am Presentation/Discussion Session 1 – Best Practices for Transitions to College (A)
- 12:15 pm Lunch Break – TETC Advisory Committee Annual Meeting and Introduction to TETC Program Evaluation Team (Complimentary lunch buffet – room 3-102)
- 1:30 pm Presentation/Discussion Session 2 – State Initiatives for Developing the Engineering and Technology and Science Workforce
- 2:30 pm Afternoon Break (Complimentary refreshments)
- 2:45 pm Presentation/Discussion Session 3 – Best Practices for Transitions to College (B)
- 4:30 pm Evening Break
- 5:30 pm Legislative Reception (Sponsored by TETC corporate members) Legislative Conference Center, Room E2.002, Texas Capitol, Capitol Extension. Shuttle service provided.

## **Tuesday, March 6, 2007**

- 8:00 am Presentation/Discussion Session 4 – Best Practices in Retention
- 9:45 am Morning Break
- 10:00 am Presentation/Discussion Session 5 – Best Practices in Course/Curriculum Re-Design
- 11:45 am Lunch Break – Comments by chair of TETC Program Evaluation Team. (Complimentary lunch buffet – room 2-102)
- 13:00 pm Presentation/Discussion Session 6 – Best Practices in Consortium Building
- 2:15 pm Capstone Discussion
- 3:15 pm Closing Comments by Executive Director
- 3:30 pm Adjourn