

Technology & Society Division Annual Report Operating Year 2003 – 2004

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I. Executive Summary

The five Technology & Society Division Executive Committee members (of which three were newly elected) convened in Oak Ridge, Tennessee, for the 3-day intensive meeting over the weekend of 03-05 October 2003, hosted by the Division Secretary, to discuss and make key decisions in implementing the restructuring of the division, focusing on improvement in membership communication and recruitment of active volunteers, as part of its two year drive to achieve sustainable viability. Key, high-level objectives achieved (see the new Division Bylaws) include:

- a) Creation of a new mission statement and identification of stakeholders;
- b) Development of a rational new set of bylaws from first principles;
- c) Development of an initial strategy and identification of key technical and social science areas; and
- d) Identification of key high-level objectives for the division to achieve in the future.

The result of our intensive, internal efforts and communication focus, introduced elsewhere, led to an impressive increase in active division volunteers, a modest but steady increase in primary division members, and rationalization into seventeen existing committees (2 leadership, 5 program, 7 function and 3 other committees).

II. Key Division Metrics

- 1) **Income Statement:** Expected year-end revenue total of **\$667.39** (Refer to **Appendix A: Financial Statement**)
- 2) **Balance Sheet:** Expected year-end custodial account balance of **\$2,855.85** (Refer to **Appendix A**)
- 3) **Membership:** **521 primary members as of April 30, 2004 (up 1.8% from 512 as of April 30, 2002, and up 5.0% from 496 as of July 30, 2002)**
- 4) **Volunteers:** at least 35 active volunteers as of May 2004 with 42 projected by June 2004 (**up 20% from June, 2003**)
- 5) **Two Leadership Committees** (Division Executive and General Committee meetings): **Fourteen meetings** (of which 9 are teleconferences and 5 are face to face meetings) held for the operating year
- 6) **Five Program Committees** (Sustainable Engineering (SE), Engineering Public Policy (EPP), Ethics & Technology (E&T), History & Society (H&S), and Intellectual Property (IP) Committees): **A total of eleven meetings** held for the operating year
- 7) **Seven Function Committees** (Conferences, Publications, Honors, Nominating, Professional Development (PD), Past Chairs and Website Committees): Held on as-needed basis for the Operating year
- 8) **Two Ad Hoc Committees (Governance and Planning):** Occasionally held at the leadership committee meetings
- 9) **International Committee with Management Division:** Hosted a session for EBM Track at IMECE 2003
- 10) **Conference sessions and Events hosted by the Division:** Delivery of a **total of 16 technical sessions, one special event** for IMECE 2003, NMW 2004 and IDETC 2003, and publication of the IMECE 2003 Proceedings of peer reviewed papers presented at T&S Track sessions, the fourth volume in series since IMECE 2000.

III. Division Functional Accomplishment Assessment

Reference: Council on Engineering Operating Guide (1997), section 4.2.1 "Division Functions":

A. Organizing Committee Meetings and Technical Sessions/Events

A1. Division Executive Committee Meetings: **A total of eight meetings** (six teleconference meetings and two face-to-face meetings) were held on July 30, 2003 (T), August 13, 2003 (T), September 3, 2003 (T), September 15, 2003 (T), October 4-6, 2003 (F), November 18 (F), March 1, 2004 (T), and April 20, 2004 (T) to discuss and make a decision on key issues of the mission, objectives, planning, strategies, etc., of the division.

A2. Division General Committee Meetings: **A total of six meetings** (three teleconference meetings and three face-to-face meetings) were held on May 6, 2003 (T), June 16, 2003 (F), October 18, 2003 (T), November 18, 2003 (F), March 5, 2004 (F), and May 4, 2004 (T) to discuss and make a decision on key issues of the mission, objectives, planning, strategies, etc., of the division.

(Note) T: Teleconference meeting F: Face-to-face meeting

A3. Program and Function Committees:

- * The SE committee met 2 times by teleconference, and once face to face at IMECE 2003.
- * The EPP committee had one teleconference and worked with staff.
- * The E&T committee met 5 times by teleconference, and plans one more this operating year.
- * The IP committee met once by teleconference at NMW2004.
- * H&S committee met once at IMECE 2004.
- * The PD committee worked with staff and the author to offer a reprise of its successful online course this fall.
- * The division's webmaster has worked extensively with ASME's New Media department to revamp the division's website. E&T 29Apr04

Table 1 List of Technology and Society Division Function, Program and Other Committees

Function Committees	Program and Other Committees
Conferences	Intellectual Property (IP)
Publications	History and Society (H&S)
Honors	Engineering Public Policy (EPP)
Professional Development (PD)	Ethics and Technology (E&T)
Past Chairs	Sustainable Engineering (SE)
Nominating	Ad Hoc Governance Committee
Website –At Large-	Ad Hoc Planning Committee
	International Committee with Management Division

A4. Conferences

The division participated in the following conferences during the operating year:

- June 16-19, 2003: ASME Summer Annual Meeting (SAM) in Atlanta, Georgia
Eleven division volunteers and one ASME Staff attended **the T&S Division General Committee meeting**. The three division members attended **the E&TM Group Operating Board meeting**, and one division member attended **the National Nominating Committee meeting** as a voting member.
- September 2-6, 2003 ASME International Design Engineering Technical Conferences (IDETC) in Chicago, IL
One division member delivered a **tutorial, cosponsored by Board on Professional Practice and Ethics (BPPE) and the T&S Ethics & Technology Committee**.

- November 15-21, 2003: International Mechanical Engineering Congress and Exposition (IMECE) 2003 in Washington, D. C.
Ten technical sessions directly sponsored by the T&S division (one in management of technology, one in sustainable engineering, one in managing technology and engineering education, one in ethics and engineering, one in professional conduct and credentialing of engineering, four in the history of technology and society, and one overview session)
Four technical sessions contributed to Engineering Business Management Track (one in technology partnering, one in intellectual property, one in international issues of engineering business management, and one in patent, profit and market share)
The Proceedings of the papers presented for the T&S Track sessions at IMECE 2003 was published by the E&TM Group Representative to IMECE 2003 (the fourth in series by the T&S Division since IMECE 2000).
One special event (joint MGMT / T&S Dinner) presided by the Division Chair.
Recruitment of The Henry Robinson Towne Lecturer from National Science Foundation by the Division Chair/E&TM Group Representative to IMECE 2003 at a request of the Management Division.
The meetings of General and Executive Committees were chaired by the Division Chair on November 18.
The Division Chair/ E&TM Group Representative to IMECE 2003/2004 attended the **Congress orientation and business meetings** (A SERAD representative later succeeded the position of E&TM Group Representative to IMECE 2004.)
- February 23-36, 2004: National Manufacturing Week 2004 in Chicago, IL
One technical session on Protecting Inventions with Patents was sponsored by the T&S division.
The T&S Program Chair for NMW 2005 (also T&S Division Chair) attended the **NMW 2005 planning committee** on February 23, observed the entire events from February 23-26, and visited Environmental Protection Agency in Chicago on February 27 to recruit a presenter for NMW 2005 and discuss future collaboration with T&S Division in the field of sustainable engineering, and thereafter recruited a speaker from the US DOE National Energy Technology Laboratory for NMW 2005.
- March 5-7, 2004: ASME Technology Executives Conference in Pittsburgh, PA
Four division volunteers (the Division Chair, Secretary, Treasurer, and a member of Sustainable Engineering Committee) attended the Conference. The T&S General Committee meeting was held on March 5, and was attended by the Division Chair, a division volunteer, and an ASME staff onsite, and by four committee members over the phone.

B. Coverage of Technical and Social Disciplines/ Areas

The division's technical programming covered the areas of **Engineering Public Policy, Ethics and Technology, History & Society, Intellectual Property, Sustainable Engineering, and International Business Management issues.**

C. Learning

C1. The division expanded its already strong conference participation to include International Mechanical Engineering Congress & Exposition (IMECE) 2003, National Manufacturing Week (NMW) 2004, a Board on Professional Practice and Ethics (BPPE) sponsored tutorial session at International Design Engineering Technical Conferences (IDETC) 2003, Summer Annual Meeting 2003, and delivered a total of 16 technical sessions and one special event, and published the Proceedings of peer reviewed papers presented at IMECE 2003 (the fourth volume in series since IMECE 2000).

C2. External relations were expanded to include new liaison relationships with the ASME units and 2 external societies - the SSIT division of IEEE, and AIChE among others, as listed in **F. Cooperation**.

C3. In the fall of 2003, the division's PD Committee conducted an online continuing education course, "Inviting Disaster" by James Chiles, an author of the book of the same title. Division made a ~\$400 profit and plans to use this low-cost, low-risk experiment as a model for future courses.

D. Recruitment

The division's known and identified active volunteer members grew **20% (from 35 to 42, including new recruits)** during the operating period.

E. Applications

The division did not cooperate with any other Divisions or Societies to identify how basic Division output may be used in products and designs.

F. Cooperation

The division did maintain or establish informal liaison relationships with the following ASME units and external societies:

F1. ASME:

- * CMA / Board on Professional Practice and Ethics
- * CPA / Board on Government Relations
- * COE / Board on Research and Technology Development / Edison Patent Award Committee
- * COE / Environment and Transportation Group / Environmental Engineering Division
- * ASME Publications Committee
- * Region XIII Sub-Region Chairs and Section Chairs

F2. External:

- * IEEE / Society of Social Impacts of Technology (SSIT)
- * American Institute of Chemical Engineers (AIChE)'s Institute for Sustainability
- * Engineers Sustainability Projects Coalition
- * Environmental Protection Agency
- * National Energy Technology Laboratory, Department of Energy

F3. CMA Unit Cooperation

The division did actively cooperate with CMA in the following areas:

- * The division provided a speaker for a joint dinner meeting of the Oak Ridge (0412), East Tennessee (0406) and UTK Student Sections on 04 October 2003. (See **Appendix B: Photograph**)
- * co-sponsored two technical sessions with Board on Professional Practice & Ethics during the operating year.

F4. COE Unit Cooperation

The division cooperated with other technical divisions in the following areas:

- * co-sponsored a joint dinner and an EBM Track session with the management division at IMECE 2003
- * co-publish a joint newsletter with management division and safety engineering and risk analysis division
- * co-sponsored several technical sessions with the management, SERA, design engineering, and bioengineering

divisions

G. Viability

The division actively sought and implemented ways to become financially viable, while providing quality technology transfer through short courses, conferences, exhibits, directories, reports, etc. The income derived from its activities exceeded its expenses.

H. Leadership

The division executive and general committees provided active leadership in developing ideas in the areas shown in **B. Coverage of Technical and Social Disciplines/ Areas.**

I. Research

The division did not work with any group Vice Presidents or the Center for Research and Technology Development to identify research needs, foster their fulfillment or translate results.

J. Publication

1) The division has published the Proceedings of the papers presented at sessions of T&S Division Track of IMECE 2003, following those for the papers presented at the T&S and Management Division Tracks from IMECE 2000 to 2002, but does not maintain any journals.

2) The division has submitted two articles to the editor for possible inclusion in the planned 2004 Issue of the E&TM Group newsletter.

3) The division also updated most of its website content.

K. Recognition

One division member was conferred the Old Guard Young Engineer's Award at the Members and Student Luncheon of IMECE 2003.

L. Students

The University of Tennessee Knoxville (UTK) Student Section members were invited as the guests of the Oak Ridge (0412) and East Tennessee (0406) Senior Sections to attend the dinner reception, organized by the T&S Executive Committee in Knoxville, Tennessee on 04 Oct 2003 (See **Appendix B: Photograph**), and approximately 30 students as well as senior members attended. The dinner speech, entitled "Economy and Engineering: Challenges and Opportunities for Students and Young Professionals" was delivered by the division chair.

M. Minorities

The division actively promoted the participation of minorities and women in the activities of the Division and its Executive Committee, in the following manner:

- * One Region XIII member serves as Chair of Executive Committee/Division Chair,
- * One Region XIII member serves on the General Committee,
- * One Region IV member serves on the General Committee, and
- * One female member serves on the E&TM Group Operating Board.

IV. Planning for the 2004-2005 Operating Year

The division plans to achieve several high level objectives during the 2004-2005 operating year. These objectives and their supporting execution plan are as follows:

- A. Promote the Division priority activities, shown in Table 2.
- B. Promote multi-disciplinary and cross-cutting engineering approaches in the aforementioned focused areas.
- C. Promote international activities such as international education of students and young professionals, and proceed to the further steps to the establishment of the ASME International Student and Young Professional Institute, proposed by the Division Chair to COE, COEd, and the ASME Management.
- D. Increase in volunteers to 100 (50% active) across 17 committees, reaching all member ages, geographic locations and professional roles.
- E. Increase in revenue to 50% of division subsidy by hosting NMW 2005 and IMECE 2004 sessions
- F. Increase in overall technical content quality as well as meeting specific targets: 25 technical sessions, 6 technical newsletter articles, 6 short courses, 6 conferences and monthly website content posting and 2 technical honors or awards
- G. Ratification of new or revised governance documents (bylaws, operating guide)
- H. Formation and adoption of a five year strategic and financial plan that will create a 10% operating surplus by 2006.

Table 2. Table 2 Priority of T&S Division Activities Based on Multi-Vote by Executive Committee Members

Items	Priority	Description	Multi-Vote Results (October 21, 2003)
White Papers	1	Approved statements that convey T&S Division's official position on a technical subject to government	15
Advocacy Statements	2	Advocacy of positions and knowledge to outside groups such as legislators and policy makers	13
Peer Reviewed Papers	3	Quality research papers published in T&S Division's knowledge or position on a technical subject to specific audience	12
Recognition, Honors and Awards	3	Issuance of honors/awards to leading technical professionals who are role models	12
Idea Exchange	5	Idea exchange to write white papers, advocacy statements, etc.	11
Technical Articles	5	General interest technical articles authored by division members to educate other division members	11
Expert Discussion	7	Expert discussion for Congress sessions, etc.	9
Interpersonal Networks	7	Typically to hold T&S Division volunteers together	9
Information Archives	9	Utilizing website, etc.	6
Short Courses	9	Forums where authors and experts present their research and exchange views on technical subjects	6
Lectures	11	One-way conveyance of important technical knowledge and views	5
Paper and Project Competition	11	Typically for students	5
Sponsored Research	11	Typically to support a white paper or position statement	5

Appendix A: Financial Statement (July 1, 2003 - April 30, 2004)

ID NO	ITEM	T&S Division	E&TM Group Total
3608	MISCELLANEOUS REVENUE	\$ 0.00	\$ 2060.00
3612	PERIODIC INTEREST DISTRIBUTION	58.69	763.59
4507	CAPITAL GAINS & LOSSES	84.69	976.81
4510	UNREALIZED CAP GAIN/LOSS	245.42	2,758.74
4790	TRSFER TO DIV CUSTODIAN FUND	0.00	2,650.00
5702	TRAVEL VOLUNTEERS	(354.27)	(2,109.29)
5704	MEALS – VOLUNTEERS	0.00	(68.24)
6002	TELECONFERENCES	363.99	363.99
6301	AUDIOVISUAL	249.33	(312.83)
7401	BADGES	(60.46)	(60.46)
7402	CERTIFICATES	0.00	(136.20)
8099	INTER-COUNCIL ALLOCATIONS	0.00	0.00
8677	GRAPHICS CHARGEBACK	0.00	(254.75)
8678	DATABASE ADMINISTRATION	0.00	(99.13)
9830	TELEPHONE (ON-SITE)	(300.00)	(600.00)
9839	FOOD & BEVERAGE	380.00	(4,910.98)
9924	AWARDS AND HONORARIUMS	0.00	(3,200.00)
	Revenue/Expense Total	667.39	(2,178.75)
(3500 TO 3599)	Operating Reserve (Beginning)	2,188.46	39,772.48

Appendix B: Photograph Taken at the ASME East Tennessee Section/Oak Ridge Section Joint Meeting at Barley's, Knoxville, after T&S Executive Committee Meeting in Oak Ridge, Tennessee on October 4 (Saturday), 2003



(From left to right: The University of Tennessee (UT) students Raymond McDonnell (mechanical, Vice President, Pi Tau Sigma Engineering Honor Society), Beamis Eammon (aerospace), Derrick Jameson (mechanical), Terra Lindsey (mechanical, member of Tau Beta Pi), Hiroshi Honda, Ph.D., P.E. (ASME T&S Division Chair), Jennifer Elliot (mechanical, member of Pi Tau Sigma), Stephen Marmaduke (mechanical, President, UT Student Chapter of ASME), David Grant (mechanical), Ellen Evans (psychology), and Robert Kennedy, P.E. (Secretary of ASME T&S Division)) **Note: Engineering and other disciplines within parentheses show majors of the students.**