AMERICAN MATHEMATICAL SOCIETY
EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES MEETING
MAY 21-22, 2010
PROVIDENCE, RHODE ISLAND

MINUTES

A joint meeting of the Executive Committee of the Council (EC) and the Board of Trustees (BT) was held Friday and Saturday, May 21-22, 2010, at the AMS Headquarters in Providence, Rhode Island.

The following members of the EC were present: George E. Andrews, Robert J. Daverman, Eric M. Friedlander, Craig L. Huneke, Bryna Kra, and Joseph H. Silverman. Ruth M. Charney was unable to attend.

The following members of the BT were present: George E. Andrews, John B. Conway, John M. Franks, Mark L. Green, Linda Keen, Ronald J. Stern, and Karen Vogtmann, and Carol S. Wood.

Also present were the following AMS staff members: Thomas J. Blythe (Chief Information Officer), Gary G. Brownell (Deputy Executive Director), Graeme Fairweather (Executive Editor, Mathematical Reviews), Sergei Gelfand (Publisher), Jane M. Hawkins (Treasurer Elect), Ellen H. Heiser (Assistant to the Executive Director [and recording secretary]), Elizabeth A. Huber (Associate Executive Director, Publishing), Ellen J. Maycock (Associate Executive Director, Meetings and Professional Services), Donald E. McClure (Executive Director), Constance W. Pass (Chief Financial Officer), and Samuel M. Rankin (Associate Executive Director, Washington Office).

President George Andrews presided over the EC and ECBT portions of the meeting (items beginning with 0, 1, or 2). Board Chair Carol Wood presided over the BT portion of the meeting (items beginning with 3).

Items in these minutes occur in numerical order, which is not necessarily the order in which they were discussed at the meeting.

0 CALL TO ORDER AND ANNOUNCEMENTS

0.1 Opening of the Meeting and Introductions.

President Andrews called the meeting to order and asked those present to introduce themselves.

0.2 Housekeeping Matters.

Executive Director McClure mentioned some details about the schedule and arrangements for the events that took place during this meeting.

1I EXECUTIVE COMMITTEE INFORMATION ITEMS

1I.1 Secretariat Business by Mail. Att. #1.

Minutes of Secretariat business by mail during the months December 2009 – April 2010 are attached (#1).

2 EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES ACTION/DISCUSSION ITEMS

2.1 Report on Mathematical Reviews Editorial Committee (MREC).

The ECBT was informed that MREC has not met since the last ECBT meeting. Ronald Solomon, Ohio State University, has been appointed MREC Chair for the period February 1, 2010 – January 31, 2013. The next meeting is scheduled for October 18, 2010 in Ann Arbor.

2.2 Report on Committee on Publications (CPub).

The ECBT was informed that CPub held its most recent meeting September 11-12, 2009; a report on that meeting was included in the November 2009 ECBT minutes. CPub's 2009 Annual Report has been filed with the Council and is also available here: http://www.ams.org/ams/cpub-rpt-09-1.pdf.

Two items recommended by CPub, Guidelines for Members of Book Series Editorial Committees and an AMS Policy on Plagiarism (as revised by the Council) were approved by the January 2010 Council.

The Chair of CPub for the term February 1, 2010-January 31, 2011, is Professor Joseph H. Silverman of Brown University. CPub's next meeting is scheduled for October 22-23, 2010, at the AMS Headquarters in Providence, RI. A review of the AMS primary journals: *Journal of the AMS, Mathematics of Computation, Proceedings of the AMS,* and *Transactions of the AMS* will be conducted during the year and presented at the 2010 meeting.

2.3 Report on Committee on the Profession (CoProf). Att. #2.

The ECBT was informed that CoProf held its most recent meeting on September 12 - 13, 2009; a report on that meeting was included in the November 2009 ECBT minutes. The 2009 Annual Report on CoProf activities has been filed with the Council and is available here: http://www.ams.org/about-us/governance/committees/CoProf2009revCouncilRpt.pdf.

The Chair of CoProf for February 1, 2010- January 31, 2011 is Professor Susan Loepp of Williams College. The Committee selected the Society's activities in the area of Professional

Development as the topic of the 2010 review. CoProf's next meeting is October 23-24, 2010 at AMS Headquarters in Providence.

The employment situation in mathematics has been a concern of CoProf. The attached document (#2) presents summary results from the survey of recruitment and retirement sent to 68 departments in February 2009 and again in March 2010.

2.4 Report on Committee on Meetings and Conferences (COMC). Att. #3.

The ECBT received the attached report (#3) on the March 20, 2010 COMC meeting. The Chair of the COMC for February 1, 2010- January 31, 2011 is Professor Aloysius "Loek" Helminck of North Carolina State University.

The next COMC meeting will be March 26, 2011, at the Hilton Chicago O'Hare Airport Hotel.

2.5 Report on Committee on Education (COE).

The ECBT was informed that COE hosted a panel discussion at the January 2010 Joint Mathematics Meetings entitled "The Common Core State standards: will they become our national K-12 math curriculum?" Panelists included: Scott Baldridge, Louisiana State University; Bert Fristedt, University of Minnesota; William McCallum, University of Arizona; and Robin Ramos, Ramona Elementary School, Los Angeles.

Lawrence Gray, University of Minnesota-Twin Cities, will chair COE again in 2010. The next COE meeting will be October 29-30, 2010 in Washington, DC.

2.6 Report on Committee on Science Policy (CSP). Att. #4.

The ECBT received the attached report (#4) on the March 12-13, 2010 CSP meeting. Rebecca Goldin, George Mason University, is the Chair of CSP in 2010.

CSP held a session at the January 2010 Joint Mathematics Meetings that centered on the Board of Mathematical Sciences and Their Applications Report, "Evaluation of NSF's Program of Grants and Vertical Integration of Research and Education (VIGRE) in the Mathematical Sciences."

2.7 Washington Office Report. Att. #5.

The ECBT received the attached report (#5) on Washington Office activities.

2.8 Report on Long Range Planning Committee (LRPC).

Executive Director McClure reported that the LRPC met on May 21, 2010 and discussed the AMS's role in the proposal, *Raising Mathematics Achievement in Urban and Rural Schools,*

that was submitted to the US Department of Education by Ken Gross of the University of Vermont. The goal of the proposed project is to expand the successful Vermont Mathematics Initiative nationwide, building a cadre of mathematics teacher leaders who are deeply knowledgeable in mathematics content and can apply their knowledge to improve mathematics instruction. In turn, teacher leaders serve as mathematics resources to all elementary and middle school teachers in their school and/or district in the teaching and learning of mathematics. The proposal includes a request for funds to support the cost of publishing the course materials, which the AMS has agreed to do. The LRPC was generally supportive of the idea of AMS getting involved in this project; more specific information will be forthcoming if NSF funds the proposal.

2.9 Report from the President.

President Andrews commented on the following matters that are of particular interest to him:

- Small research grants for junior faculty members:
  See item 2E.4 of the executive session minutes for current status.

- Proposed AMS Fellows Program:
  A committee has been working on revising the proposal and will probably present it to the fall 2010 ECBT, with the hope that it will be recommended to the January 2011 Council for inclusion on the 2011 election ballot.

- Increased cooperation with other mathematical organizations:
  The April 2010 Council approved AMS cosponsorship of an invited address at the MAA Mathfest. The address will be expository in nature and tied to a special session organized by the AMS. President Andrews is consulting with COMC about the possibility of setting up a similar arrangement with SIAM.

  Possible joint AMS-MAA-SIAM membership: See item 2.15 for current status.

- Education issues:
  The National Governors Association Center for Best Practices and the Council of Chief State School Officers is about to release a set of state-led education standards, the *Common Core State Standards*. These English-language arts and mathematics standards for grades K-12 were developed in collaboration with a variety of stakeholders including content experts, states, teachers, school administrators and parents. The goal of the standards is "to establish clear and consistent goals for learning that will prepare America's children for success in college and work." See www.corestandards.org for further information.

  Expanding the Vermont Mathematics Initiative nationwide: See item 2.8 for current status.

2.10 2011 Journal Pages and Prices.

The ECBT approved the following numbers of pages, and the BT approved the following prices, for 2011 journal subscriptions:

	2011 pages	**2011 list prices**
*Abstracts of Papers Presented to the AMS**	850*	$150
Bulletin of the AMS	768	$478
Conformal Geometry and Dynamics	350	$25
*Current Mathematical Publications**	4,932*	$784
Journal of the AMS	1,200	$327
*Mathematical Reviews**		
Issue pages	13,513*	
Annual index pages	7,514*	
Total MR pages	21,027*	
MR Products		
Paper		$668
MR Sections		$191
Data Access Fee		$8,647
MathSciNet		$2,288
Mathematics of Computation	2,400	$554
Memoirs of the AMS	3,200	$741
Notices of the AMS	1,550	$510
Proceedings of the AMS	4,200	$1,213
Representation Theory	750	$25
*St. Petersburg Mathematical Journal**	1,000*	$1,966
Sugaku Expositions	240	$219
*Theory of Probability and Mathematical Statistics**	375*	$751
Transactions of the AMS	6,600	$1,991
*Transactions of the Moscow Mathematical Society**	280*	$532
*the numbers of pages for these journals are not completely within the staff's control, so they are currently the staff's best estimates and were included in the version of the 2011 budget presented at this meeting.		

2.11 2011 Individual Member Dues.

The process for setting individual dues for year x starts in November of year x-2 when the ECBT makes a recommendation to the Council. The Council then acts on that recommendation and sends it back to the BT for final ratification.

The January 2010 Council approved the BT's recommendation that there be no increase in the individual Regular High dues for 2011; this means the rate in 2011 for Regular members in the high-income category remains at $168. The high/low dues cutoff remains at $85,000.

The BT ratified the January 2010 Council's decision.

2.12 2011 Institutional Member Dues.

The ECBT approved an average increase of 3% in institutional member dues for 2011.

2.13 Registration Fees for the January 2011 Joint Mathematics Meetings.

The ECBT reviewed budget summaries for the January 2011 New Orleans, Louisiana Joint Meetings and exhibits. Based on this information, the BT voted to advise the Joint Meetings Committee that the member pre-registration fee for this meeting be set at $220 (0% increase over 2010 fee). [It is noted for the record that the June 2010 Joint Meetings Committee set the member pre-registration fee at $224 (2% increase over 2010 fee).]

2.14 Stipend and Expense Allowance for Centennial Fellowship.

The ECBT approved awarding one Centennial Fellowship for 2011-2012 in the amount of $79,000, with an expense allowance of $7,900.

2.15 Update on Discussions Regarding Joint Membership. Att. #26.

The ECBT received the following report from Executive Director McClure:

Since the November 2009 ECBT meeting, two meetings of the Presidents and Executive Directors (EDs) of the AMS, the MAA and SIAM have taken place to discuss issues related to a discounted joint membership in all three of the societies.

The first meeting took place at the January 2010 Joint Mathematics Meetings in San Francisco. All three Presidents and all three EDs were present. At that time, concern was expressed about the differential impact on expected dues revenues and expected new memberships for the three societies, based on results of a market survey done in fall 2009. The three EDs were asked to explore alternative revenue sharing plans with a goal of better balancing the impacts on revenues. A goal was set to produce a single unified proposal for discounted joint membership that could be presented to the governing bodies of each of the three organizations.

The three EDs did evaluate alternative revenue sharing models, two of which are described in Att. #26. On April 26, 2010 the three Presidents and Tina Straley and Don McClure met again and all agreed that the model that used equal dollar discounts for each society's regular dues achieved a reasonable balance of expected impact on revenues and that it would be simple to implement. The details are sketched in the attachment.

There is still some hard work to do in proposing a simple method of actually implementing a discounted joint membership. Questions of implementation will need to be addressed by staff of the three societies. A complete proposal should be ready for consideration at the November ECBT meeting.

2.16 2011 ABC and ECBT Meetings.

The ECBT approved the following dates and sites for 2011 ABC and ECBT meetings:

ABC	April 8, 2011 (Friday)	by conference call
ECBT	May 20-21, 2011 (Friday-Saturday)	Ann Arbor, Michigan
ABC	October 6, 2011 (Thursday)	Providence, Rhode Island
ECBT	November 18-19, 2011 (Friday-Saturday)	Providence, Rhode Island

It was noted that the members of the ABC in 2011 will be: Daverman, Franks, Friedlander, Hawkins, and Vogtmann.

2C EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES CONSENT ITEMS

2C.1 November 2009 ECBT Meeting.

The ECBT approved the minutes of the meeting of the Executive Committee and Board of Trustees held November 20-21, 2009, in Providence, Rhode Island, which had been distributed separately. These minutes include:

- ECBT open minutes prepared by the Secretary of the Society (http://www.ams.org/secretary/ecbt-minutes/ecbt-minutes-1109.pdf)
- ECBT executive session minutes prepared by the Secretary of the Society

See also item 3C.1.

2I EXECUTIVE COMMITTEE AND BOARD OF TRUSTEES INFORMATION ITEMS

2I.1 Changes in Registration Fees for Conferences, Employment Center, Mathjobs, and Short Course. Att. #11.

The Executive Director is authorized to make changes in registration fees for conferences, the Employment Center and Short courses held at the Joint Mathematics Meetings, and for Mathjobs.org.

Att. #11 reports the changes authorized since the last ECBT meeting.

2I.2 Using AMS Points to Donate Books to the Book and Journal Donation Program.

In November 2008, the ECBT approved a trial plan to allow use of AMS Points to be used for donations to the Book and Journal Donation Program. The results of the trial were to be reviewed at the May 2010 ECBT meeting.

The trial was postponed until the new association management software is operational. Thus the review of the trial is also postponed. Staff now expects the trial to take place in 2011 and the review to be possible at the May 2012 ECBT meeting.

2I.3 AMS Presence at the Annual Meeting of SACNAS. Att. #12.

The AMS has provided $5,000 toward support of the mathematics program at the annual national meetings of the Society for Advancement of Chicanos and Native Americans in Science (SACNAS). Public Awareness Officers Annette Emerson and Michael Breen represented the AMS at the most recent meeting held October 15 - 18, 2009, in Dallas, Texas. There was also a session of the game, "Who Wants to be a Mathematician," that was very popular. Att. #12 is a report on the activities related to mathematics at this meeting.

SACNAS has shown itself to be highly effective at nurturing talented undergraduates from within their target communities to successful completion of graduate degrees in science and mathematics. AMS's continuing support for and presence at the SACNAS national meetings has enabled it to build strong ties within this community of scholars committed to excellence.

2I.4 Epsilon Fund Grants. Att. #13.

In 1999, the Epsilon Fund was created by the Society to provide support for the Young Scholars Program. The Program awards grants, which support student scholarships and program operating costs, to selected summer programs for mathematically talented high school students. This year, the Young Scholars Awards Committee evaluated twelve applications for support from the Epsilon Fund, and recommended funding eight of them in addition to the two programs that received two-years of funding last year. The members of the Committee are: Irwin Kra, Rafe Mazzeo, Sergei Tabachnikov (Chair), and Jeremy Teitelbaum. A list of the programs funded for summer 2010 is attached (#13).

2I.5 Report on AAAS Meeting. Att. #14.

A report on the AMS-supported activities at the 2010 annual meeting of the American Association for the Advancement of Science (AAAS) is attached (#14).

2I.6 2010-2011 AMS Centennial Fellowship.

The AMS Centennial Fellowship Committee has announced that Joel Bellaiche (Brandeis University) is the winner of the 2010 Fellowship competition. Bellaiche has accepted the award.

The amount of this fellowship for 2010-2011 will be $77,000, with an additional expense allowance of $7,700.

2I.7 AAAS-AMS Mass Media Fellowship.

The AMS will sponsor Benjamin Pittman-Polletta as its 2010 Mass Media Fellow. Ben is a graduate student in mathematics at the University of Arizona and will work at *The Oregonian* this summer.

The Mass Media Fellowship program is organized by the American Association for the Advancement of Science (AAAS) and is intended to strengthen the connections between science and the media, to improve public understanding of science, and to sharpen the ability of the fellows to communicate complex scientific issues to non-specialists. It is a 10-week summer program that places graduate and post-graduate level science, engineering and mathematics students at media organizations nationwide.

An announcement of the AMS Mass Media Fellow for 2010 will be made in the *Notices* and posted on the AMS website.

2I.8 Congressional Fellow.

The AMS has chosen Hugh MacMillan as its 2010-2011 Congressional Fellow. Hugh earned his Ph.D. in Applied Mathematics from the University of Colorado at Boulder. He is currently working as an assistant professor of mathematics at Clemson University.

The AMS will sponsor Hugh's fellowship through the Congressional Fellowship program administered by the American Association for the Advancement of Science (AAAS). Fellows spend a year working on the staff of a Member of Congress or a congressional committee, working as a special legislative assistant in legislative and policy areas requiring scientific and technical input.

An announcement of the new Congressional Fellow will appear on the AMS website and in the *Notices*.

2I.9 Report on Exchange Program between the AMS and the New Zealand Mathematical Society. Att. #22.

In August 2009, the AMS received a proposal from the New Zealand Mathematical Society (NZMS) that the two societies set up a bilateral agreement for an exchange of distinguished, prominent lecturers, with a US-based mathematician touring New Zealand one year and a New Zealand based mathematician touring the United States in alternate years. The NZMS has a related agreement with the London Mathematical Society, under which every two years a prominent UK-based mathematician lectures in New Zealand, which both parties find beneficial.

In September 2009, AMS President George Andrews established a Task Force to consider the NZMS proposal; its members were Robert J. Daverman, Aloysius G. Helminck, Vaughan F.R. Jones, Matthew Miller, Donald E. McClure, Katherine St. John and George E. Andrews, Chair. The Task Force found the proposal attractive and interesting, and it recommended implementation of the procedures outlined in Att. #22 to the Committee on Meetings and Conferences (COMC). COMC recommended implementation to the April 2010 Council, which approved the recommendation.

2I.10 Report on AMS Participation in an AWIS Project Funded by the NSF ADVANCE Program. Att. #23.

In early 2009, the Association for Women in Science (AWIS) approached several scientific societies, including the AMS, about participating in an in-depth study of prizes awarded to women. They were planning to submit a proposal to the NSF ADVANCE program to fund the project.

In February 2009, the AMS provided a letter of support for inclusion with the proposal, pledging to provide data about AMS awards and the awards processes and related information. The AWIS proposal and the letter of AMS support are included in Att. #23. At the time the letter was provided, the proposal was not available and the scope of the project was not known. The participating societies include AMS, MAA, SIAM, the American Chemical Society, the American Geophysical Union, the American Statistical Association, and the Society for Neuroscience.

The April 2010 Council discussed the project and possible forms of AMS cooperation. The Council reached consensus that the joint work with AWIS should be guided by the regular governance bodies of the AMS including, in particular, the Committee on the Profession (CoProf) and the Council. As a first step, the Council agreed that the President and Secretary should seek about three volunteers to participate in a meeting of the AWIS Task Force in June 2010 and who would report back to CoProf. The AWIS Task Force is composed of volunteers from AWIS and the cooperating disciplinary societies who will be trained in equity issues, disciplinary society structure and organizational dynamics; AWIS intends for the members of the Task Force to lead workshops, training, and other activities in the partner societies.

3 BOARD OF TRUSTEES ACTION/DISCUSSION ITEMS

3.1 Financial Review.

3.1.1 Discussion of Fiscal Reports.

The BT received and discussed various fiscal reports. Approval of the 2011 budget will be requested at the November 2010 ECBT meeting.

3.1.2 Capital Expenditures – 2009 and 2010 Capital Purchase Plans.

Capital purchases in 2009 totaled approximately $673,100, of which approximately $126,600 related to 2008 capital projects deferred to 2009. The amount budgeted solely for 2009 projects was $543,800, which was overspent by $2,600. However, of the total spent on capital items in 2009, $279,000 was spent on unbudgeted acquisitions (new vehicle for Distribution, used 4-color printing press, and a new color copier for printing) and $135,000 remained unspent as the related projects were deferred until 2010.

The 2010 capital budget totals $1,529,500 and includes the purchase and implementation costs of the new Association Management Software system at $1,052,000. It also includes three carry-over projects from 2009, which were updated for current costs and current planned activities in late 2009, which total $180,000 (Providence conference rooms, Providence HVAC replacement and Michigan overhead lighting). The 2010 budget has also been corrected from the November 2009 ECBT version, as certain carry-over projects from 2009 were inadvertently left out of that version.

3.1.3 Capital Expenditures - Approval of Specific Purchases. Att. #15.

The Board of Trustees approved the attached minutes (#15) of the meeting held by technical means regarding the following purchase:

- Added $72,000 to the amount authorized for the Financial Systems upgrade, originally approved in December 2007.

3.2 Spendable Income, Operations Support Fund and Other Related Items. Att. #16.

The Society uses its long-term investments for several purposes, and for that reason it divides its investments into various funds. The following five standing items deal with those funds – additions, transfers and spending.

The description of the way in which the AMS uses its long-term investment portfolio is summarized in the diagram in Att. #16, which has labels showing how the following five items are connected to the process.

3.2.1 Addition to Operations Support Fund (OSF).

At its November meeting, the Board approved the staff recommendation that the amount owed to operations from the long-term investment portfolio at December 31, 2009 would remain there and be officially added to the OSF. (The amount owed to operations arises as a result of spendable income netted against contributions to endowment and Board designated funds.) The total so added at December 31, 2009 to the OSF was $2,296,197. An additional $2,000,000 was approved to be added to the OSF at the May 2009 ECBT meeting, which was completed shortly thereafter.

At December 31, 2009 the Society's current assets totaled approximately $19,287,000 and its current liabilities totaled approximately $14,500,000, resulting in a current ratio of 1.33 to 1, and an adjusted current ratio (deferred revenue removed from both the numerator and denominator) of approximately 2.45 to 1. These ratios are similar to those at the end of 2008. The cash inflow from renewals of 2010 memberships and subscriptions is lower and has been received later than in previous years, due to the continued effects of the recession on subscribers and members. However, the operating portfolio (money market funds, certificates of deposit and intermediate investments consisting mainly of domestic bond mutual funds) will remain well-funded throughout 2010 and will be capable of meeting the cash flow needs of the Society, including significant planned capital acquisitions such as the Association Management software. Its value should remain as a solid base for 2011 before that year's cash inflows occur.

No further additions to the OSF are contemplated at this time, as it seems prudent to wait until the 2010 revenue picture is clearer and the 2011 budget needs are known.

3.2.2 Rebalancing of Economic Stabilization and Operations Support Funds.

Under the policy adopted by the Board of Trustees at its May 2006 meeting, at the end of each fiscal year the allocated values of the Economic Stabilization Fund (ESF) and the Operations Support Fund (OSF) are rebalanced such that the ESF always equals the target balance.

The amount and direction of the rebalancing required at each year end is principally dependent upon the return on the long-term investment portfolio in any year. This return was approximately 27.5% for 2009; accordingly, the ESF transferred approximately $6,257,000 to the OSF at the end of 2009 (the reverse was true in 2008, when the OSF transferred $7,880,900 to the ESF).

3.2.3 Allocation of Operations Support Fund (OSF) Spendable Income.

The May 2001 Board of Trustees approved the following (from item 2E.5):

> *Income from reserves should be allocated to each year's budget to service and outreach programs of the Society (without specifying exactly which programs). The total amount should be approved by the May ECBT, when revenue projections for the following year are made.*

The spendable income from the OSF for 2010 and 2011, determined according to the guidelines approved by the BT is $1,451,100 and $1,645,100, respectively. The 2010 amount had been previously approved. The increase for 2011 initially appears odd in the face of the significant portfolio losses in 2008 and the large rebalancing transfer from the OSF to the ESF required at the end of 2008. However, the balance in the OSF at the end of 2009 is higher than it was at the end of 2005, which accounts for the increase over the period.

It was noted that the balances in the OSF for the base years are not normalized for additions and withdrawals for the purpose of calculating the spendable income (as is done for the true endowment funds).

The BT approved the Chief Financial Officer's recommendation that the amount of $1,645,100 be designated as OSF spendable income for 2011.

3.2.4 Appropriation of Spendable Income from Unrestricted Endowment.

The May 2001 Board of Trustees approved the following (from item 2E.5):

> *Each year, the budgeting process will include recommendations for allocating spendable income from the Unrestricted Endowment for specific projects. The allocated income will be treated as revenue for operations, offsetting (part of) the expenses. These recommendations will be brought to the Board for approval at its November meeting in the normal budgeting process. The goal will not be to use all the income from such funds each year, but rather to use some of the income every year for the support of mathematical research and scholarship. Using such income should be a regular part of our operations rather than an exceptional situation.*

The 2011 preliminary revenue budget includes the full amount of 2011 spendable income from unrestricted true endowment funds under the assumption that appropriate projects will be designated to receive the income. The amounts budgeted for 2009, 2010 and 2011 are $277,000, $272,300 and $267,300, respectively. The BT will designate the projects that will receive this income in 2011 at their November 2010 meeting.

3.2.5 Report on Changes in Appropriated Spendable Income.

The Executive Director has the authority to transfer spendable income that will not be used on an approved project to another approved project, in case additional support is needed. No such transfers were made in 2009.

3.3 Audit Committee. Att. #30.

Audit Committee Chair John Franks reported that the Committee met on May 21, 2010 with Beth Gecewicz, Manager, and Dave Gagnon, Partner, from the auditing firm of KPMG LLP, to hear a report on the 2009 audit and to review the audited financial statements for the years ended December 31, 2009 and 2008 (drafts of these documents had been provided separately prior to the meeting to all members of the BT). Several other BT and staff members attended part of the meeting, and the Committee also met privately with Ms. Gecewicz and Mr. Gagnon.

Upon recommendation of the Audit Committee, the BT voted to accept the draft audited financial statements for the years ended December 31, 2009 and 2008 and delegated to management final resolution of minor edits and issuance of the final statements. The final statements are attached (#30).

The BT accepted KPMG's proposal to conduct AMS's audit in 2011 for a fee of $67,000.

3.4 Investment Committee. Att. #31.

Investment Committee Chair John Franks reported on the Committee's May 21, 2010 meeting; the minutes of the meeting are attached (#31).

The BT approved the Investment Committee's recommendation that the portfolio managed by Frontier Capital Management be closed and the funds transferred to the Vanguard Total Stock Market Fund.

3.5 Cash Management and the Operating Portfolio. Att. #17.

The BT received the attached report (#17) summarizing the Society's cash management policies and short-term investment performance during 2009.

3.6 Report on Financial Software Implementation. Att. #18.

The BT received the attached status report (#18) on the implementation of the Epicor Financial System suite of products.

3.7 Report on Association Management Software Implementation. Att. #19.

The BT received the attached status report (#19) on the implementation of the Personify association management software project.

3.8 Report on Information Architecture Project for the AMS Website. Att. #20.

The BT received the attached status report (#20) on the project to redesign the AMS website.

3.9 Annual Reports on Divisions. Att. #27.

Section VI (Report on Projects and Activities) of the 2009 Operating Plan was made available to BT (and EC) members separately prior to the meeting. This final section provides a brief overview of the division, reporting on the status of certain activities that were planned for 2009 and summarizing budgetary implications.

In addition, Division Directors consulted with their liaison trustee(s) by conference call and then prepared the attached reports highlighting 2009 activities (Att. #27). The attachment also includes the current Trustee liaison assignments.

Now that the 2009 Operating Plan is complete, a copy of it is attached to the paper record copies of these minutes (Att. #32).

3.10 Meeting of the Mathematical Reviews Corporation.

In 1983, when the building that currently houses Mathematical Reviews was purchased, a Michigan non-profit corporation was formed in order to obtain exemption from local property taxes in Ann Arbor and from sales and use taxes in Michigan. In order to maintain these exemptions, the corporation ("Mathematical Reviews") must be maintained by holding an annual meeting at which the Officers and Directors of the corporation are elected.

The AMS Board of Trustees meeting was therefore temporarily adjourned, and the AMS Trustees convened as the Board of Directors of the Mathematical Reviews Corporation.

The Board of Directors of the Mathematical Reviews Corporation elected the following officers:

President of the Corporation:	Carol S. Wood
Treasurer of the Corporation:	John M. Franks
Secretary of the Corporation:	Karen Vogtmann
Directors of the Corporation:	George E. Andrews
	John B. Conway
	Mark L. Green
	Linda Keen
	Ronald J. Stern

The meeting of the Board of Directors of the Mathematical Reviews Corporation then adjourned and the meeting of the AMS Board of Trustees reconvened.

3C BOARD OF TRUSTEES
CONSENT ITEMS

3C.1 November 2009 BT Closed Executive Session Meeting.

The BT approved the minutes of the closed executive session meeting of the Board of Trustees held November 21, 2009, in Providence, Rhode Island, which had been distributed separately.

3C.2 Procedures for the Appeals for Discounted Subscriptions.

The BT approved the continued use of the following guidelines for 2011, which staff follow in responding to appeals for discounted subscriptions:

- Minimum price for MR Data Access Fee (DAF) of $200 applicable to institutions in countries found in the two poorest World Bank country listing. Staff can provide this level of discount even if the country does not have a national DAF.
- The discounted price for MR DAF for domestic institutions would not be lower than the greater of 40% of a list price DAF or 40% of the institution's mathematical sciences serials budget, not to exceed regular list price for a DAF.
- The discounted price for MR DAF for non-domestic institutions not included in the first category above would not be lower than 40% of a DAF. To the extent possible, information about serials budgets would also be collected, and, if desired, staff would provide information on publishing activity at the institution.
- For MR derived products, allowable prices would be regular list price for paper and lowest published price for MathSciNet.
- For other AMS journals, the lowest allowable price would be marginal cost, applicable to the most desperate cases.

3C.3 Resolutions for Retirees.

The BT approved the following proclamation for the employees noted who retired in 2009:

Gregory Sousa	35 years
Galina Kovaleva	15 years

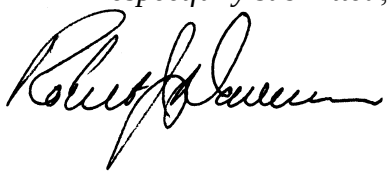
Be it resolved that the Trustees accept the retirement of _____ with deep appreciation for his/her faithful service over a period of _____years. The Board expresses its profound gratitude for this long record of faithful service. It is through the dedication and service of its employees that the Society is able to effectively serve its members and the greater mathematical community. The Trustees offer _____ their special thanks and heartfelt good wishes for a happy and well-deserved retirement.

3I BOARD OF TRUSTEES INFORMATION ITEMS

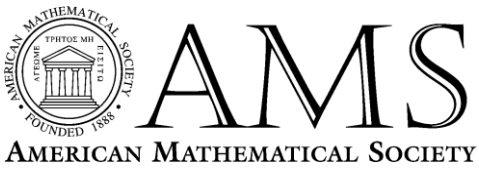
3I.1 Change in Fringe Benefits.

The November 1996 BT authorized the Executive Director to approve changes in benefit plans (except for those changes which would significantly enhance or degrade the Society's financial health or relations with its employees) and asked that these changes be reported to the BT when appropriate. No changes have been made since the last ECBT meeting.

Respectfully submitted,



Robert J. Daverman, Secretary
Knoxville, Tennessee
August 26, 2010



Department of Mathematics, 302C Aconda Court
University of Tennessee, 1534 Cumberland Avenue
Knoxville, TN 37996-0612 USA
Phone: 865-974-6900 Fax: 865-974-2892
www.ams.org

Robert J. Daverman, Secretary
Email: daverman@math.utk.edu

SECRETARIAT
Business by Mail
December 1, 2009

MINUTES
from the Ballot dated November 2, 2009

There were five votes cast by Robert Daverman, Susan Friedlander, Michel Lapidus, Matthew Miller and Steven Weintraub.

1. Approved electing to membership the individuals named on the list dated October 20, 2009.

2. Approved changing the dates of the Fall 2010 Central Section meeting at Notre Dame, Indiana, from Oct 29-31 to November 5-7. (Unfortunately this conflicts with a Southeastern Sectional meeting, but there is simply no better alternative at Notre Dame in Fall 2010.)

3. Approved Virginia State Univ, Petersburg, VA 23806, as a new Institutional Member.

4. Approved the minutes of the Secretariat Business by Mail from the ballot dated October 1, 2009.

Robert J. Daverman

AMERICAN MATHEMATICAL SOCIETY

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University of Tennessee, 1534 Cumberland Avenue
Knoxville, TN 37996-0612 USA
Phone: 865-974-6900 Fax: 865-974-2892
www.ams.org

Robert J. Daverman, Secretary
Email: daverman@math.utk.edu

SECRETARIAT
Business by Mail
January 4, 2010

MINUTES
from the Ballot dated December 1, 2009

There were four votes cast by Robert Daverman, Susan Friedlander, Matthew Miller and Steven Weintraub.

1. Approved electing to membership the individuals named on the list dated December 20, 2009.

2. Approved holding a joint meeting of the AMS and the South African Mathematical Society at Nelson Mandela Metropolitan University in Port Elizabeth, South Africa, on Tuesday, 29 November 2011 until Saturday, 03 December 2011.

3. Approved holding a Central Sectional Meeting at the University of Kansas on March 30 - April 1, 2012.

4. Approved KONSIIMKON (Inst ID: UKONS-KON), Universitaet Konstanz, Konstanz, Germany, for International Institutional Membership.

5. Approved Minot State University, Department of Math & Computer Sciences, Minot, ND 58707, for Institutional Membership.

6. Approved the minutes of the Secretariat Business by Mail from the ballot dated December 1, 2009.

Robert J. Daverman

AMERICAN MATHEMATICAL SOCIETY

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Robert J. Daverman, Secretary
Email: daverman@math.utk.edu

SECRETARIAT
Business by Mail
February 1, 2010

MINUTES
from the Ballot dated January 4, 2010

There were five votes cast by Robert Daverman, Susan Friedlander, Michael Lapidus, Matthew Miller and Steven Weintraub.

1. Approved electing to membership the individuals named on the list dated December 20, 2009.

2. Approved holding an Eastern Sectional Meeting at Cornell University in Ithaca, NY, on September 10-11, 2011.

3. Approved Francis Marion Univ, Dept of Math, Florence, SC, for Institutional Membership.

4. Approved Technical University Clausthal, Clausthal-Zellerfeld, Germany, for International Institutional Membership.

5. Approved Univ Sergio Arboleda, Bogota, COLUMBIA, for International Institutional Membership.

6. Approved the minutes of the Secretariat Business by Mail from the ballot dated December 1, 2009.

Robert J. Daverman

AMERICAN MATHEMATICAL SOCIETY

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Robert J. Daverman, Secretary
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SECRETARIAT
Business by Mail
March 1, 2010

MINUTES
from the Ballot dated February 1, 2010

There were five votes cast by Robert Daverman, Susan Friedlander, Michael Lapidus, Matthew Miller and Steven Weintraub.

1. Approved electing to membership the individuals named on the list dated January 20, 2010.

2. Approved holding a meeting of the AMS Council in Chicago, Illinois, on April 16, 2011.

3. Approve holding a meeting of the AMS Council in Boston on January 3, 2012.

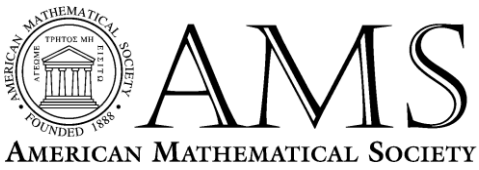
4. Approved holding a Western Sectional Meeting at the University of Hawaii, Honolulu, on March 3-4, 2012.

5. Approved holding a Southeastern sectional Meeting at the University of South Florida in Tampa, Florida, on March 10-11, 2012,

6. Approved University of Sherbrooke, Sherbrooke, Canada, as a new International Institutional Member.

7. Approved the minutes of the Secretariat Business by Mail from the ballot dated January 4, 2010.

Robert J. Daverman



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SECRETARIAT
Business by Mail
April 1, 2010

MINUTES
from the Ballot dated March1, 2010

There were five votes cast by Georgia Benkart, Robert Daverman, Michael Lapidus, Matthew Miller and Steven Weintraub.

1. Approved electing to membership the individuals named on the list dated February 20, 2010.

2. Approved holding a meeting Southeastern Sectional Meeting at Wake Forest University in Winston-Salem, NC, on September 24-25, 2011.

3. Approved the minutes of the Secretariat Business by Mail from the ballot dated February 1, 2010.

Robert J. Daverman

Survey Results (Faculty Recruitment)

Employment Survey, February 2009 & March 2010

This document presents summary results from the survey of recruitment and retirement sent to 68 departments in February 2009 and again in March 2010. The information herein is from a snapshot of the complete survey responses received by Monday, March 2, 2009 for the 2009 Survey and by Monday, April 26, 2010 for the 2010 Survey. The response rate was 100% in 2009 and 90% in 2010.

This summary reports projections of counts to the full population of departments in Groups I Public, I Private, II, III, M and B according to the standard groupings of the Annual Survey. The method used to calculate the projected counts from the sample counts is described in the Endnotes.

Overview

The latest Annual Survey data are not yet available, but preliminary data indicate that the number of people receiving doctoral degrees will be in the same range in 2009-10 as in 2007-08 (1378) and in 2008-09 (1430).Excluding doctoral degrees from statistics departments, there were 1061 new Ph.D.s in 2007-08 and 1072 new Ph.D.s in 2008-09.

Data from the quick survey of representative departments just completed by the AMS project that the total number of academic positions available for these new doctoral candidates is 775, down about 16% from last year and down about 46% from 2007-08. New doctorates apply primarily for academic positions. Typically (based on Annual Survey reports) more than 10% of the total population of new doctoral recipients take positions outside the U.S. and about 75% of those employed in the U.S. take academic positions.

It is important to note that there are young mathematicians exiting postdoctoral and instructorship positions who are also candidates for the estimated 775 positions being recruited. To put the count of 775 in perspective, the 2007 Annual Survey reported 1543 academic positions open to new mathematics doctoral recipients in 2006-07.

2010 Results

Response Rate

Survey Group	Number Sampled	Number of Responses	Proportion of Faculty Sampled
Group I Public	10	9	0.401
Group I Private	10	8	0.291
Group II	10	10	0.242
Group III	11	10	0.159
Group M	13	11	0.077
Group B	14	13	0.037
TOTAL	68	61	

Total Recruitment, Change from 2007-08 to 2009-10, Projected Counts

Survey question: Report the number of full-time positions requiring a doctorate you have tried to fill for the 2010-2011 academic year.

Survey Group	Number Reported in March 2010	Change in Number from 07-08 to 09-10	Percentage Change from 07-08 to 09-10
Group I Public	127	-37	-22.7%
Group I Private	96	-48	-33.3%
Group II	136	-99	-42.1%
Group III	56	-88	-60.9%
Group M	104	-376	-78.4%
Group B	329	-465	-58.6%
TOTAL	849	-1114	-56.8%
I+II+III	360	-185	-33.9%
I+II+III+M	464	-561	-54.8%

New Doc Recruitment, Change from 2007-08 to 2009-10, Projected Counts

Survey question: Report the number of positions reported in Question 1 that were (are) open to new doctoral recipients.

Survey Group	Number Reported in March 2010	Change in Number from 07-08 to 09-10	Percentage Change from 07-08 to 09-10
Group I Public	107	-40	-27.1%
Group I Private	83	-17	-17.2%
Group II	116	-37	-24.3%
Group III	38	-94	-71.4%
Group M	104	-78	-42.9%
Group B	329	-383	-53.8%
TOTAL	775	-650	-45.6%
I+II+III	305	-94	-23.6%
I+II+III+M	409	-172	-29.6%

2009 Results

Response Rate

Survey Group	Number Sampled	Number of Responses	Proportion of Faculty Sampled
Group I Public	10	10	0.455
Group I Private	10	10	0.387
Group II	10	10	0.242
Group III	10	10	0.162
Group M	14	14	0.103
Group B	14	14	0.038
TOTAL	68	68	

Total Recruitment, Change from 2007-08 to 2008-09, Projected Counts

Survey question: Report the number of full-time positions requiring a doctorate you have tried to fill for the 2009-2010 academic year.

Survey Group	Number Reported in February 2009	Change in Number from 07-08 to 08-09	Percentage Change from 07-08 to 08-09
Group I Public	165	-4	-2.6%
Group I Private	90	-57	-38.6%
Group II	153	-83	-35.1%
Group III	74	-62	-45.5%
Group M	184	-252	-57.8%
Group B	367	-472	-56.3%
TOTAL	1034	-930	-47.3%
I+II+III	483	-206	-29.9%
I+II+III+M	667	-458	-40.7%

New Doc Recruitment, Change from 2007-08 to 2008-09, Projected Counts

Survey question: Report the number of positions reported in Question 1 that were (are) open to new doctoral recipients.

Survey Group	Number Reported in February 2009	Change in Number from 07-08 to 08-09	Percentage Change from 07-08 to 08-09
Group I Public	117	-33	-22.1%
Group I Private	39	-70	-64.3%
Group II	157	4	2.7%
Group III	74	-50	-40.0%
Group M	165	-39	-19.0%
Group B	367	-393	-51.7%
TOTAL	918	-580	-38.7%
I+II+III	387	-148	-27.7%
I+II+III+M	551	-187	-25.3%

Free-form Comments from Respondents (2010)

Survey question: Please feel free to describe likely changes for your department in response to the anticipated downturn in employment for your Ph.D. candidates.

Survey Group I Public

We are increasing class sizes and still turning away students in some undergraduate service courses.

A number of such candidates who ordinarily would have no difficulty finding a job will have great difficulty. We employ an unusually high number of postdoctoral assistant professor on three year term appointments, many with reduced teaching from grants, etc. They are also having a great deal of trouble finding jobs, including several who would typically have no trouble in a normal market. Of eight who were having problems, two have had recent success, and we are extending the appointments for at least three more. There are still three without positions for next year.

We are affected by it in terms of positions that we can offer as well as trying to give employment to our recent PhD's.

We have had budget reductions, and may be further reductions next year. Faculty positions that become vacant are being eliminated, and will result in a decrease of about 10% in faculty size for all departments in the College of Arts and Sciences, including ours. We will replace some of the tenure-track losses with postdoctoral or short-term appointments, and also increase class size in our courses.

Survey Group I Private

It is unlikely that all of our new PhD's will be employed next year.

We are aggressively trying to upgrade the quality of our department through replenishment of upcoming retirements. Our hope is that this will also upgrade the quality of our graduate program and the marketability of our PhDs.

All students have received job offers so far, so no changes seen at the moment.

Survey Group II

I expect that the number of filled ten-track positions in the department will decrease in the next two years, because of 1 or 2 retirements and perhaps a separation, which will not immediately be replaced.

The economic downturn seems to have increased the number and quality of students applying to study for a Ph.D. We also had excellent candidates for the tenure-track positions that we filled this year.

We are losing 3 faculty to retirement this year and have lost 3 last year (a total of 5.5 FTE professor lines). We were allowed to hire 1.5 FTE professor lines this year.

Many students are delaying their graduation and stay on as TA's for an additional year. This lowers the size of the incoming class and will put more folks on the job market next year.

Survey Group III

We are encouraging our students to broaden their career goals and consider opportunities they would not have considered in a stronger economy.

No change.

Survey Group M

Our university has not been affected too badly. We have not been denied the ability to hire, and we plan to ask for a new tenure line. I don't think we will get it, but the dean has not discouraged us. Our salaries have not been frozen, but the raises are small.

Our institution is experiencing significant fiscal stress. We have an elderly faculty some of whom might retire in the next few years. There is a real danger that we will not be allowed to replace them with full-time faculty.

A retirement at the end of the 2007-2008 academic year would normally have resulted in a hiring process during 2008-2009 for the replacement to begin in the fall of 2009, but that hiring process was put on hold. We were allowed to resume that search in the fall of 2009 for a new hire to begin in the fall of 2010, essentially a one-year delay. This resulted in the temporary full-time faculty member that usually fills that one year of the hiring process being here for two years instead. We have a faculty member retiring at the end of the current 2009-2010 year. When our search for the delayed replacement brought in several highly qualified candidates, we petitioned to be allowed to offer positions to two of them, filling the spot vacated by retirement at the end of the current year a year early -- without the usual year of a temporary full-time replacement. Our arguments were threefold: we would avoid the expenses of advertising and interviewing next year; the quality of job candidates was unusually good, certainly fallout from reduced hiring across the profession over the past two years; and there are advantages to having a cohort to go through the new-faculty-to-tenure process together. These final two arguments were strengthened by our good fortune in having two (actually three) very strong female candidates who matched our needs and whose interests we matched well. Perhaps the constrained hiring market contributed to our ability to have more success in recruiting excellent job candidates from traditionally underrepresented groups to our faculty. We are delighted to have two excellent candidates who have accepted our offers and will begin here in the fall. The downturn in employment strangely, accidentally, fortuitously landed us a double hire about which we are all excited.

Survey Group B

We also aren't able to hire more visitors, so classes will be larger or I will be hiring adjunct faculty to teach a few courses normally taught by those with PhD's.

None. We do have fewer faculty and will continue to not replace faculty who leave until our financial situation stabilizes.

just want to clarify my earlier responses: The 2 new positions I indicated were replacements for the 2 that I later said were retiring.

We do not have a graduate program.

Endnotes

Projected Counts

Within a *Survey Group*, the ratio between a projected count reported herein and the corresponding actual count for the sample is equal to the ratio within that *Survey Group* of the *Total Doctoral Faculty* (2007TDF) for that group in 2007 to the Total Doctoral Faculty In The Sampled Departments (2007TDFS) for that group in 2007.

The 2007 data are used for TDF because the analysis of the 2008 Annual Survey is still in progress.

Within Group---

$$\text{Projected Count} = (\text{Sample Count}) \times (2007\text{TDF} \div 2007\text{TDFS})$$

There is a variation to this rule for the Group M and Group B analysis. 2008TDFS replaces 2007TDFS because the 2008 data are complete and the 2007 data are not.

Participating Departments

Group I Public

University of California, San Diego

University of Illinois at Chicago

Purdue University

University of Michigan

City University of New York, Graduate Center

Ohio State University, Columbus

Pennsylvania State University

University of Washington

University of Wisconsin

Group I Private

California Institute of Technology

Northwestern University

Harvard University

Washington University

Columbia University

Cornell University

Rensselaer Polytechnic Institute

Brown University

Group II

Arizona State University

University of California, Davis

University of Florida

University of Georgia

University of Iowa

University of Kentucky

Louisiana State University, Baton Rouge

North Carolina State University, Raleigh

University of Pittsburgh, Pittsburgh

Texas A&M University

Group III

University of Alabama

University of South Florida

University of Kansas

University of Louisiana

University of Maryland, Baltimore County

University of Mississippi

Boston College

Montana State University

New Jersey Institute of Technology

University of Memphis

Group M

Florida International University

Ball State University

Western Kentucky University

University of Dayton

John Carroll University

Wright State University

University of Tulsa

Millersville University

Villanova University

University of Texas-Pan American

Hampton University

Group B

Loyola Marymount University

Bradley University

University of Southern Indiana

Northern Kentucky University

Williams College

Grand Valley State University

St. Olaf College

Truman State University

Lafayette College

Providence College

University of Richmond

Gonzaga University

University of Wisconsin-Eau Claire

AMS Committee on Meetings and Conferences

Highlights of 2010 Meeting

The Committee on Meetings and Conferences (CoMC) held its annual meeting on March 20, 2010, at the Hilton Chicago O'Hare Airport. Aloysius "Loek" Helminck, chair, presided over the meeting

Introductory items

The meeting began with a round of introductions. Time was then devoted to discussing the components that play roles in AMS meetings: the Secretariat, the Meetings and Conferences Department, and CoMC. The history of some decisions made by CoMC was reviewed. Committee members had numerous questions, which were answered by Secretary Robert Daverman, Associate Secretaries Georgia Benkart, Matthew Miller, and Steven Weintraub, and AMS staff members AED Ellen Maycock and Director of Meetings and Conferences Penny Pina.

Reports

- ***Secretariat.*** Robert Daverman reported on the March 19, 2010, Secretariat meeting.

    - Upcoming international meetings: A Joint AMS-SMM Meeting will be held at Berkeley on June 2 – 5, 2010. A Joint International Meeting with Chile will be held December 15-18, 2010 (considered as the 2011 meeting). A Joint International Meeting with South Africa will be held November 30 – December 3, 2011 (considered as the 2012 meeting). A proposal for a Joint International Meeting with Romania in June 2013 was discussed; formal approval for this meeting will be solicited in the April Secretariat Meeting.
    - Upcoming named lectures at Sectional Meetings: The 2010 Erdős Lecture was given by Doron Zeilberger at the University of Kentucky on March 27, 2010. The 2011 Erdős Lecutre will be given by Emmanuel Candes, at the University of Nebraska, on October 15, 2011. Terence Tao has accepted an invitation agreed to do the 2010 Einstein Lecture in Los Angeles, at the Sectional Meeting to be held at UCLA October 9 – 10, 2010. There will be no Einstein Lecture in 2011.
    - The Secretariat discussed the synchrony of Special Sessions at the Joint Mathematics Meetings and Sectional Meetings. CoMC endorsed the recommendation that organizers should be strongly encouraged to follow the standard format (20 minute talks with 10 minute breaks or 45 minute talks with 15 minute breaks) so that participants can move between Special Sessions.
    - The Secretariat discussed a policy that appears to be out of date, concerning whether someone could speak on a paper that has already been published or presented elsewhere. The Secretariat decided to omit the following sentence from the manual

for organizers of Special Sessions and from the general information web page about abstracts:

Papers may not be presented if published in full before the date of the Society meeting or if previously presented to any learned society except the National Academy of Sciences or the Royal Society of Canada.

- ***Subcommittee to Review the AMS Conference Program and Institutes*.** This subcommittee was composed of Ann Trenk (chair), Skip Garibaldi, and Alex Iosevich. The subcommittee reported on the 2005 Summer Institute on Algebraic Geometry, the 2007 von Neumann Symposium and the ongoing Mathematics Research Communities (MRC) program. The MRC program is currently funded by an NSF grant, and the von Neumann Symposium series has been endowed. Funding for a Summer Institute is requested from the NSF on a case-by-case basis. The subcommittee also compared the activities of the AMS in the mid-1990s with what is currently in place. CoMC agreed that the mathematics institutes now provide sufficient opportunities for one-week conferences in the summer, and that the establishment of something similar to the former SRC program would not be desirable. However, CoMC felt that the 3-week Summer Institute is unique. A subcommittee (Don McClure and Ann Trenk) will investigate whether it may be possible to bring back the Summer Institute on a more regular basis, for a variety of topics (not just algebraic geometry). The subcommittee recommended that the MRC program try to have more diversity in the topics that are offered each summer. It was suggested that former MRC participants apply for AIM workshops, in order to continue their collaborations. There was a summer school at IPAM in 2007, just before the last von Neumann Symposium, in order to help early career mathematicians gain some background in the topic of the conference. CoMC suggested that a pre-symposium summer school be suggested to the organizers of each von Neumann Symposium, after the topic is chosen.
- ***CoMC Focus Group Breakfast*.** David Meredith chaired the focus group at the 2010 JMM. Since his term on CoMC has ended, Loek Helminck presented the ideas that had been discussed during that breakfast. Much of that discussion centered around the difficult job market and ways to help those who are seeking employment consider non-academic jobs. Loek Helminck or Ann Trenk will chair the 2011 focus group in New Orleans.
- ***San Francisco Questionnaire*.** The responses from the San Francisco questionnaire were reviewed. Once again, the AMS used an electronic survey form and sent email to all participants after the meeting with a link to the survey. About 1100 participants responded to the survey.

New business:

- ***AMS at MathFest***: AMS President George Andrews and MAA President David Bressoud have discussed the AMS once again having a presence at MathFest. CoMC

endorsed their recommendation that there be a joint AMS-MAA invited lecture, with a related Special Session. This recommendation will be brought to the Council.

- ***AMS Activity Groups at Sectional Meetings***: CoMC chair Loek Helminck proposed that the AMS consider creating special interest or activity groups similar to those run by SIAM and the MAA. A subcommittee (Loek Helminck, David Farmer, Janet Talvacchia, Robert Daverman and Ellen Maycock) will investigate this, and report back to CoMC for further consideration.
- ***Criteria for awarding travel grants to graduate students to attend the JMM***: The AMS has given grants to graduate students to attend the 2009 and 2010 Joint Mathematics Meetings, funded by a donation made by an anonymous donor. The decisions have been made by small selection committees. This will be an ongoing program for the AMS, and the Council has appoved a standing selection committee. However, firm criteria have not yet been established for the selections. A subcommittee (Steven Weintraub, chair, Skip Garibaldi and Alex Iosewich) was appointed to propose criteria. The criteria will be considered by CoMC, so that a working list will be available in time for the next round of awards. The criteria will be brought to the Council for a formal approval in January 2011.
- ***Changing the date of the JMM in the future:*** Two members wrote to the AMS last fall, asking if the Joint Mathematics Meetings could be moved into December in the future, in order to facilitate graduate student and employment recruitment. This proposal was not approved by CoMC.
- ***A lectureship between the AMS and the New Zealand Mathematical Society***: The New Zealand Mathematical Society has proposed a lectureship exchange between the two societies. A Task Force (George Andrews, chair, Robert Daverman, Aloysius Helminck, Vaughan Jones, Matthew Miller, Donald McClure and Katherine St. John) recommended this proposal on a trial basis, for 6 years. CoMC endorsed this recommendation, and will bring it to the Council.

2011 CoMC Meeting.

- The committee approved the suggested date of March 26, 2011 for its next meeting, to be held at the Hilton Chicago O'Hare Airport.
- For the 2011 meeting, the topic to be reviewed will be: National Meetings (Scientific Program).

Ellen Maycock
Associate Executive Director
April 1, 2010

American Mathematical Society
Committee on Science Policy Meeting
March 12-13, 2010
Washington, DC

Summary Report

The 2010 Committee on Science Policy (CSP) meeting included presentations on priorities for the FY 2011 federal budget, the appropriations process, budgeting for the National Science Foundation, funding opportunities at the NSF's Division of Mathematical Sciences, legislative updates, grassroots programs and science diplomacy.

Highlights from presentations:

Kei Koizumi
Assistant Director for Federal Research and Development
White House Office of Science and Technology Policy
Kei Koizumi began his presentation by talking generally about the federal investment in basic and applied research and then gave an overview of the proposed FY 2011 budget. He pointed out that funding for research had been trending downward in recent years, but that the Obama Administration is trying to reverse the trend. The President's plan for science and innovation spending through 2017 shows a commitment to doubling the budgets of NSF, DOE Science and NIST. The proposed FY 2011 budget is a start in this direction by providing a 6 percent increase in funding for basic and applied research. Koizumi also noted that the American Recovery and Reinvestment Act (ARRA) investments went to all three agencies last year and that the duration of these awards will continue for the next several years.

Deborah Lockhart
Deputy Division Director
Division of Mathematical Sciences, National Science Foundation
Deborah Lockhart explained that the NSF Division of Mathematical Sciences has five major areas of investment: core programs, interdisciplinary activities, institutes, infrastructure, and workforce. She discussed the budget history of DMS and noted that their ARRA funds have all been awarded at this point -- 70 percent of which went to individual investigator grants, with 55 percent of those going to individuals that had not received funds previously. The effects of these additional ARRA funds will be felt over the next several years. In order to avoid having all these grants terminate at once, the NSF spread the duration of these awards over 3, 4 and 5 years.

Lockhart reported a 7.4 percent budget increase over FY 2009 appropriated funding for DMS in FY 2010 and a proposed 5 percent budget increase for FY 2011. She also discussed the consolidation of workforce and infrastructure portfolios – the VIGRE program will end in FY 2010 and several other programs will end in FY 2011.

Dixon Butler
Professional Staff, U.S. House of Representatives
Commerce, Justice, Science & Related Agencies Appropriations Subcommittee
Dixon Butler gave attendees some insight into the annual appropriations process. He explained the procedures involved in moving the President's annual budget request from authorization to appropriations

and described the many steps involved in this process as the bill makes its way through the House and Senate to the President's desk for signature.

Neysa Call and Jason Unger
Office of Senator Harry Reid (D-NV)
Neysa Call and Jason Unger gave an overview of what the next several months in the Senate may hold. An example of upcoming legislation is the America Competes Act, which is due to be reauthorized this year. It is hoped that a bill will come to the Senate floor by the Memorial Day recess. They also pointed out that although there is general bi-partisan support for science on the Hill, it is expected to be a difficult budget year that could impact federal funding for basic scientific research. It remains to be seen how provisions for science funding in the FY 2011 budget will fare in this climate.

Dennis Glanzman and Yuan Liu
NIH/NIMH and NIH/NINDS
Dennis Glanzman began the presentation with a brief structural overview of the National Institutes of Health. He then discussed training and career development opportunities at NIH, including their F, K and R awards. The F awards are fellowship awards that provide salary support for students in training. The K Awards are career development awards and the R awards are research project grants used to support basic and applied biomedical research.

Glanzman spoke in some detail about the K25 Mentored Quantitative Research Career Development Award and the K99/R00 Mentored Pathway to Independence Award. He discussed the scope of these awards, the review criteria and where to get more information. He also discussed the three most common research grants at NIH: R01, R03 and R21. The R01 being the most commonly used grant mechanism supporting biomedical research in all fields.

Yuan Liu continued the presentation with practical information on how to write a grant application. She discussed the review criteria for applications and talked about funding opportunities for mathematicians.

Bradley Smith
Office of Legislative and Government Affairs
American Chemical Society
Brad Smith provided background information on the office of public affairs at ACS and defined what grassroots advocacy means to a professional society. He discussed two types of active grassroots programs: *broad based*, where there are a large number of volunteers tasked with participating in email, telephone and petition campaigns and attending town hall meetings; and *quality based*, where 'key contacts' participate in district visits, fly-in campaigns, facility tours, round table discussions and advisory committees. He provided examples of how ACS uses these two types of programs to advance the legislative efforts of their society, including using social media platforms like Facebook and Twitter.

Smith gave insight on recruiting and maintaining a robust volunteer effort and talked about lessons learned in the process of building their grassroots network, including the need to have support from the organization's leadership, the time to grow such a network and that an organization will no longer have total control of its message.

Eric Bone
Office of the Science and Technology Adviser
U.S. Department of State
Eric Bone spoke about his past experiences as a mathematician involved in development and diplomacy. He recounted his work in the Peace Corps in Malawai, at U.S. Agency for International Development (USAID) in Afghanistan, and at the U.S. Department of State. He discussed the mission, budget and workforce of the Department of State and the USAID and talked about how a scientific background is beneficial to a successful career in science diplomacy.

Joel Parriott
Program Examiner, Science and Space Programs Branch,
White House Office of Management and Budget (OMB)
Joel Parriott discussed his role as Program Examiner at OMB and his responsibility for budget oversight of the National Science Foundation (NSF). He explained that his position allows him to make recommendations about NSF funding, but that he is not involved in division level allocations. He also talked about the structure of OMB, the American Recovery and Reinvestment Act (ARRA) and the budget process in general.

Katherine Crowley
AMS 2009-2010 Congressional Fellow
Office of Senator Al Franken (D-MN)
Katherine Crowley, the current AMS Congressional Fellow, talked about her experience with the AAAS fellowship program and her position in the office of Senator Al Franken. She described the orientation, training and placement processes for new Fellows and talked about what a typical day is like for her serving in the office of a senator. She discussed how her background in mathematics has helped her in her position and spoke about the importance of relationship building on the Hill. She also spoke briefly about legislation that Senator Franken has introduced, some of which she helped develop.

Other Discussion
The committee had an open discussion on what the AMS should be doing with regard to grassroots advocacy. Committee members wanted to explore whether the society was doing enough to encourage the involvement of the mathematics community in this endeavor. Since relationship building is such an integral part of a successful grassroots campaign, the committee discussed ways to encourage more mathematicians to be involved and how best to provide information that enables them to conduct successful meetings with their Congressional representatives. Information sessions at the Joint Mathematics Meetings were proposed, as was an opinion piece for the *Notices* on the importance of grassroots advocacy to the discipline.

Additionally, the committee had a discussion on how best to help the mathematics community earn more NSF graduate fellowships. Since the fellowships are awarded in direct proportion to the number of applications received, it was felt that the AMS should encourage math students to apply. The AMS could use the grad student blog, provide information for inclusion in school orientation materials and send emails to department chairs in an effort to increase the number of mathematics students applying for these fellowships.

Committee on Science Policy Events at the 2011 Joint Mathematics Meeting
The committee has two slots at the Joint Mathematics Meetings each year, one for a government speaker and the other for a panel discussion. Several options were discussed to fill these places in the JMM program.

Date of Next Meeting
The 2011 Committee on Science Policy meeting will be held on March 4-5, 2011 in Washington, DC.

Submitted by Anita Benjamin
American Mathematical Society
April 21, 2010

Washington Office Report
April, 20, 2010

The President's FY 2011 Federal Budget Request was made public on February 1, 2010. Even though the President has pledged to freeze non-security discretionary spending, the Request contains solid support for non-defense scientific research. The National Science Foundation (NSF) is slated for a budget level of $7.424 billion, an 8 percent increase over FY 2010. The Department of Energy's Office of Science (SC) requests a 4.4 percent increase over FY 2010 or a budget of $5.121 billion. Within the Office of Science, the Advanced Scientific Computing Research (ASCR) division, the division that houses the Applied Mathematics and Scientific Discovery through Advanced Computing (SciDAC) programs, the two programs funding mathematical sciences, will increase by 8.1 percent to $426 million.

The Division of Mathematical Sciences (DMS) of NSF requests a 5 percent increase, which would bring the division's budget to $253.46 million. The Applied Mathematics program in ASCR would grow by 1.5 percent to $45.5 million and the SciDAC program would remain at the FY 2010 level of $53.3 million. Funding for the mathematical sciences through the National Institutes of Health will increase approximately 3.3 percent.

The Department of Defense basic research account will decrease by 7.7 percent, however the combined budgets of the mathematical sciences programs funded through the Air Force Office of Scientific Research, the Army Research Office, the Defense Advanced Research Projects Agency, the Office of Naval Research, and the National Security Agency will increase by 4.9 percent to $114.1 million.

DMS had an appropriated FY 2009 budget level of $224.84 million with an additional $97.34 million from the American Recovery and Reinvestment Act (ARRA), for a total FY 2009 budget of $322.18 million. This one time budget increase enabled the division to fund many more mathematicians than usual. Each year the Division is unable to fund many worthy proposals because of lack of funds. The current FY 2010 DMS budget is $241.38 million with the FY 2011 Budget Request at $253.46 million. At the current DMS growth rate, many mathematicians funded in FY 2009 will not be able to renew their grants. The total NSF budget needs to be at least at the FY 2009 level of $9.5 billion, appropriated plus ARRA funds, as soon as possible. At this level, the DMS budget would increase substantially. The FY 2011 Budget Request projects the NSF budget to be at $9.5 billion in FY 2015, which is not soon enough.

The Budget Request submission begins the appropriations process. The House and Senate appropriations subcommittees will receive their budget allocations during the spring and then each subcommittee will have deliberations on spending priorities. Subcommittee decisions will affect whether agency and program budgets under the jurisdiction of the subcommittee will stay the same or differ from the Request level. Constituencies for various agencies and programs will "lobby" the subcommittees for higher allocations, especially those agencies and programs that were caught in the President's freeze on non-security discretionary spending. The congressional subcommittee does not have to abide by the freeze, but even if it does, the subcommittee may choose not to freeze the same programs as the President. Agencies or

programs that received increases in the Request can become targets of lobbyists trying to raise budgets for their favorite agencies or programs.

NSF is under the jurisdiction of the House and Senate Commerce, Justice, Science and Related Agencies Appropriations Subcommittees (CJS). In the current budget environment, the 8 percent budget increase for NSF is substantial. Other agencies and programs under CJS jurisdiction did not fare as well and this makes NSF a target of constituencies looking for opportunities to raise money for their programs. The thinking will be that NSF can give up some of its increase to help other programs. This is very likely to happen unless the chairs of the House and Senate CJS subcommittees are committed to NSF at the 8 percent level. Best guess is that NSF will not be able to hold on to the 8 percent and will receive an increase in the 6 to 7 percent range.

Recent conversations with staff of the chairs of the House and Senate CJS Subcommittees suggest that no agreements on FY 2011 budgets will be reached until after the November elections. This means that the government will be operating on a Continuing Resolution (CR) from October 1 until sometime after the elections.

This year the Congress will attempt to re-authorize the America COMPETES Act. The Subcommittee on Research and Science Education of the House Committee on Science and Technology has approved a bill that reauthorizes NSF and will be rolled into the America COMPETES Act. Under this bill, NSF budgets are authorized at $8.23 billion in FY 2011, $8.93 billion in FY 2012, $9.56 billion in FY 2013, $10.11 billion in FY 2014, and $10.70 billion in FY 2015. Note that the FY 2011 authorized budget level is $795.27 million or 10.7 percent higher than the NSF FY 2011 Budget Request level. It should also be noted that authorization budget levels in the designated years are seldom, if ever, achieved.

This reauthorization bill emphasizes basic, high-risk, high-reward research by proposing that five percent of the NSF research budget be dedicated to this type of research and that special solicitations be developed for high-risk, high-reward research. Other research emphasis includes interdisciplinary collaborations for national needs, a manufacturing research initiative, and institutional research partnerships that include minority-serving institutions and/or predominantly undergraduate institutions and at least one or more institutions in the top one hundred institutions receiving the largest amount of research funding from the Foundation. The reauthorization puts the Integrative Graduate Education and Research Traineeship program and the Graduate Research Fellowship program on the same level in that funding for each program will grow or decrease at the same rate. The bill establishes a postdoctoral fellowship in STEM education research, and a foundation-wide postdoctoral research fellowship program focused on interdisciplinary research and/or high-risk, high-reward research.

The Coalition for National Science Funding (CNSF), chaired by Sam Rankin, held its 16th Annual Capitol Hill Exhibition of NSF funded projects on April 14. Anita Benjamin served as director of the Exhibition and did her usual excellent job of organizing the event. The Exhibition included 37 NSF-funded research and education projects representing a variety of scientific areas. The AMS sponsored the exhibit of Professor Susan Minkoff of the University of

Maryland – Baltimore County (UMBC). Minkoff's exhibit was titled "Industrial Modeling and Simulation: The Wave of the Future. The Exhibition drew over 250 attendees including nine Members of Congress and the Director and Acting Deputy Director of NSF.

Meetings were set up on the day of the Exhibition with the offices of Minkoff's Members of Congress. Susan and Sam met with the staff of Senators Benjamin Cardin and Barbara Mikulski, and Representative Elijah Cummings. In each meeting, Susan spoke about the importance of NSF funding for her research, as well as the importance of NSF funding to UMBC.

The Washington Office continues to be active in coalitions advocating for science research and education including organizing the monthly meetings of CNSF, taking part in the Task Force for the Future of American Innovation meetings and activities, and attending Council of Graduate Schools sponsored monthly meetings on aspects of graduate education.

Sam Rankin served on the selection committee of the AAAS Mass Media program, helping to choose students who will spend ten weeks with a mass media outlet. Ben Pittman-Polletta, a Ph.D. student at the University of Arizona, is the 2010 AMS-AAAS Mass Media Fellow.

The mathematical sciences chapter for the Annual AAAS Research and Development Report was again written by Sam Rankin. The volume, which will be published in May, contains budget information based on the FY 2011 Federal Budget Request. The information is compiled from agency program staff and agency documents.

During the 2010 Joint Meetings, the DC office was involved in several activities, including CSP and COE sponsored presentations, the annual Department Chairs Workshop, a Congressional Fellows presentation and discussion, and a session on non-academic employment.

Thirty-one department chairs representing undergraduate (5), masters (9), and doctorate (17) departments attended the Department Chairs Workshop. The Workshop leaders were Larry Gray, former head and director of undergraduate studies, School of Mathematics, University of Minnesota; John Meakin, chair, Department of Mathematics, University of Nebraska – Lincoln; and Stephen Robinson, chair, Department of Mathematics, Wake Forest University. This year the Workshop leaders used a case studies approach to elicit discussion on department issues. The cases discussed were real and came from the workshop leaders and participants.

The non-academic employment session involved identifying and inviting mathematicians working in business and government to lead an information session on the subject. Allen Butler, Daniel Wagner Associates, Christina Bahl, National Security Agency, Rick Chartrand, Los Alamos National Laboratory, Dale Smith, Vicis Capital LLC, and Rebecca Wasyk, Metron Scientific Solutions participated on the panel and Jim Glimm moderated the session.

The Congressional Fellows discussion was led by current AMS Congressional Fellow Katherine Crowley, and David Weinreich, the first AMS Congressional Fellow and currently Legislative Director for Congressman Bob Etheridge (D-NC). Hugh MacMillan of Clemson University has been chosen as the 2010-2011 AMS Congressional Fellow.

The Washington Office organized the March 12-13, 2010 AMS Committee on Science Policy meeting. Meeting participants heard presentations from representatives of the White House Office of Science and Technology Policy, the White House Office of Management and Budget, the Department of State, NSF, the National Institutes of Health, and Congress. Mathematics department chairs/representatives were invited to attend the meeting.

Respectfully submitted,
Sam Rankin

Changes in Registration Fees for 2010-11

The Executive Director has approved the fees listed below for the 2010-11.

2011 Short Course Fees

Year	Name of Course	Preregister-member/non	On-site-member/non	S/U/E-prereg*	S/U/E-onsite*
2005	The Radon Transform and Appl. to Inverse Prob.	$85/$108	$115/$140	$37	$55
2006	Modeling and Simulation of Biological Networks	$87/$115	$118/$148	$38	$57
2007	Aspects of Statistical Learning	$90/$120	$120/$151	$40	$60
2008	Applications of Knot theory	$94/$125	$125/$155	$42	$63
2009	Quantum Computation and Quantum Information	$96/$130	$130/$160	$44	$65
2010	Markov Chains and Mixing Times	$98/$135	$132/$165	$46	$67
2011	**Computational Topology** **Evolutionary Game Dynamics**	**$100/$140** **$100/$140**	**$134/$170** **$134/$170**	**$48** **$48**	**$69** **$69**

*S/U/E: Student/Unemployed/Emeritus

2011 Employment Center Fees

The fees listed in the chart below will go into effect for the 2011 Employment Center in New Orleans, LA.

In the past year the AMS launched new Employment Center software provided by Boxwood Technologies. The fees below include use of a table, the web information system, and the web appointment scheduling system. Computer work stations are provided onsite for use of participants, although ideally most contact will be made before the meeting begins.

Note also that applicants no longer pay fees, however ALL participants will need a meeting badge for admittance into the room.

Employment Center registration on the new software also includes one job ad on the EIMS system, so for 2011 prices have been adjusted slightly to reflect the purchase of an employment center table plus one ad.

Summary of recent and proposed fees

	2007	2008	2009	2010	**2011**
Quiet Area table (1-2 int)	235	245	250	265	**295**
Second Quiet Area table	85	95	100	100	**105**
Committee table (3-6 int)			350	365	**400**
Second Committee table				100	**105**

2010-11 EIMS Fees

The following fees have been set for the 2010-11 Employment Information in the Mathematical Sciences.

The functionality of EIMS has been greatly enhanced (beginning in July, 2009) by an arrangement with Boxwood Technology to provide a web hosting service for the ads. This service has the appearance of being housed on the AMS website. Note that the paper version of EIMS was discontinued in July, 2009. The "Featured Job" functionality displays ads in a box near the top of the applicant screen and was purchased for 50 of the 536 ads placed in fall/winter 2009.

Listing fees for July through June:

	2009/10	2010/11
60 day listing, unlimited size	200	210
120 day listing, unlimited size	275	285
180 day listing, unlimited size	350	360
"Featured Job" add-on	75	75

2010-11 Mathjobs.org Fees

The following fees will go into effect for 2010-11 Mathjobs.org employer registrations (from July 1, 2010 through June 30, 2011). Employers located in North America will be allowed to open regular accounts. All employers will be allowed to open advertising-only accounts. The service is free to applicants.

The fee structure will now allow for one-ad (but otherwise full service) accounts to be purchased by North American employers for a slight discount. This new fee is meant to accommodate the needs of smaller schools and to encourage employers from outside academia to try using Mathjobs.org.

Employer fees:

Regular account (for up to seven ads), 12 months from date of sign up:	$525
Regular account (for one ad only), 12 months of usage from date of sign-up:	$375
Advertising-only account (for one ad), 12 months from date of sign up:	$260

Previous fees:

	Regular accounts	Ad-only accounts
2009/10	$500	$250
2008/09	$450	
2007/08	$400	
2006/07	$350	
2005/06	$300	

Ellen J. Maycock
Associate Executive Director
March 18, 2010

Report to the AMS on the Mathematics activities at the 2009 SACNAS conference

The success of Research Experiences for Undergraduate programs (REU) has shown a persistent need for minority undergraduate students to be exposed to areas of active research in mathematics, and in particular to enhance the opportunities available to them to present their research findings at national venues such as the SACNAS conference. Mathematics has always been a part of SACNAS and together with our partnering and sponsoring agencies and organizations such as the National Security Agency (NSA) National Science Foundation (NSF), American Mathematical Society (AMS), and 7 NSF-funded Mathematics Institutes we continue to sponsor a coordinated effort to both increase and sustain the pipeline of underrepresented mathematicians through a strong presence at the SACNAS conference.

As we did last year, in 2009 there was funding from NSA for 150 students to attend the 2009 SACNAS conference in Dallas, TX on October 15-18, 2009. Additional funding was provided by individual NSF grants as well as AMS support. SACNAS effectively implemented a broad range of educational, and professional and leadership development activities for undergraduate, graduate, post-doctoral and young professionals. These provided critically important opportunities for mathematics students and professionals to establish and maintain contact with a strong network who, as mentors and role models, have and will support them throughout their college and university years and their professional lives. Students' oral or poster presentations, attendance at mathematics focused symposia and mini-courses addressed current research in mathematics.

The 2009 SACNAS national conference offered the following activities and events:

PRECONFERENCE ACTIVITIES

Math Mini Course-An Introduction to Wavelets and Their Applications in Digital Imaging
Sponsored by Math Institutes

The theory of wavelets is relatively new and was advanced by researchers in mathematics, engineering, physics, computer science, and geology. Even within mathematics, the area is quite multidisciplinary engaging researchers whose areas of expertise are approximation theory, harmonic, complex, functional, and numerical analysis. Applications of the topic are widespread:

computer engineers use wavelets to perform signal and image processing while geologists use them to search for underground reservoirs of oil. The internet is an important tool in our everyday lives and many of the pages we visit contain digital images. An overwhelming number of these images are stored in a compressed format known as JPEG. At the turn of the century, this format was overhauled and the result was a vastly improved wavelet-based compression method called JPEG2000. In this mini course, we will present a basic introduction to wavelets and demonstrate how wavelets can be used in image processing applications. We will also discuss the role of wavelets in JPEG2000.

Session Chair(s) and Speakers
Patrick Van Fleet, PhD, University of St. Thomas
Catherine Beneteau, PhD, University of South Florida

Math Institutes Modern Mathematics Workshop: Session I (Continues on Thursday)
Sponsored by Math Institutes

Seven national mathematics and statistics institutes offer this session to invigorate the research careers of minority mathematicians and mathematics faculty at minority-serving institutions. We highlight presentations on topics drawn from the institutes' upcoming programs, a keynote speaker, and an informative panel presentation on the 2010-11 programs and workshops.

1:00-1:40PM *American Institute of Mathematics*
Nathanial Dean, PhD. Texas State University of San Marcos
1:40-2:20PM Institute for Mathematics and its Applications.
Hannah Calendar, PhD. University of Portland
2:20-3:00PM Institute for Pure and Applied Mathematics
Rajul Pandya, PhD. National Center for Atmospheric Research.
3:20-4:00PM Mathematical Biosciences Institute
Judy Day, PhD. Mathematical Biosciences Institute.
4:00-4:40 Mathematical Sciences Research Institute
Gunter Uhlmann, PhD. University of Washington.
4:40-5:20PM Park City Mathematics Institute
Ron Devore, PhD. Texas A&M University

5:20-6:00PM Statistical and Applied Sciences Institute
Oliver R. Diaz-Espinoza, PhD.

Math Institutes Modern Mathematics Workshop: Session 2 (Continued from Wednesday)
Sponsored by Math Institutes
9:00-10:00AM Keynote Speaker: Rafael A. Irizarry, PhD, Biostatistics Department at John Hopkins University.
10:20AM-12:00PM-Panel of all the Institute Representatives

Mathematics Institutes Reception
This event reunited students who have participated in mathematics summer research programs. Undergraduate mathematics students were invited to hear and ask questions about students' experiences in graduate school and the REU programs in which they participated. Mathematics institutes representatives gave information about mathematics opportunities for all students. Refreshments and appetizers were served.
*Sponsored by***:** AIM, Fields, IMA, IPAM, PCMI, MSRI, MBI, SAMSI

New Methods in Topology and Quantum Geometry
Sponsored by the National Science Foundation

This symposium will give an introduction to the awesome subjects of topology and quantum geometry, hint at deep connections between them and discuss exciting directions for future research. Faculty, graduate, and undergraduate students alike are encouraged to attend!

Session Chair: Dagan Karp, PhD. *Harvey Mudd College*

Clearing Up Common Misconceptions in Statistics
Sponsored by the American Statistical Association
Students will enhance their understanding of basic statistics concepts and develop statistical thinking by applying recommendations of the GAISE College Report (www.amstat.org/education/gaise). Through group activities emphasizing statistical literacy, real data, conceptual understanding, active learning, and technology, students will learn correct principles to clear up common misconceptions in statistics.

Session Chairs:
Martha Aliaga, PhD. *Director of Education, American Statistical Association*
Keith Crank, PhD. *Assistant Director, American Statistical Association*

MENTORING

Conversations with Scientists: Mathematics, Neuroscience and Mathematics/Science Education Research

Representing the spectrum of science disciplines, SACNAS professionals renowned for their scientific and mentorship activities gather with student attendees to engage in informal roundtable discussions about careers in the sciences. Conversations are intended to break down the barriers that often exist between students and professionals. Through Conversations with Scientists interactions, mentors share their personal experiences and insights offering students guidance and inspiration regarding educational and career choices. The personal connections made during Conversations with Scientists set the stage for ongoing mentorship and support throughout the conference. Among the mentors taking part in the Marine Biology & Oceanography session are a individuals in ocean science and global climate change.

KEYNOTE PRESENTATION: Who Wants to be a Mathematician?

Sponsored by the American Mathematical Society and NSF-MSP

Speaker: Michael Breen. PhD and Bill Butterworth, PhD.
The session would expose mathematicians and non-mathematicians alike to some applications of mathematics. In addition to seeing uses of mathematics, attendees will learn about pure mathematics, while being entertained by the six contestants. **Cory Colbert**, undergraduate at Virginia Commonwealth University, won $2000 from the AMS and a TI-Nspire graphing calculator from Texas Instruments.

KEYNOTE PRESENTATION: during the "Inspirational Panel"

Juan Meza, Department Head and Senior Scientist, High Performance Computing Research, Lawrence Berkeley National Laboratory, in the "Insights to Success: Real Life Adventures of SACNAS Scientists"

SCIENTIFIC SYMPOSIA:

An Abstract Look at Algebra

Sponsored by SACNAS (via a grant from the National Security Agency and NSF-MSP)

The session highlights the applicability of abstract algebra to various branches of math, science, and engineering. Whether used as a tool for understanding the coding/decoding of messages or to shed light on Statistics, this session will give the audience a broad view of the multidisciplinary aspects of algebra.

Session Chair(s): Stephen Wirkus, PhD. *Associate Professor, Arizona State University*

Edward Mosteig, PhD. *Associate Professor, Loyola Marymount University*
Rebecca Garcia, PhD *Assistant Professor, Sam Houston State University*
Ivelisse Rubio, PhD *Professor, University of Puerto Rico at Rio Piedras*
John Little, PhD *Professor, College of the Holy Cross*

Mathematics of the New Generation

Sponsored by SACNAS (via a grant from the National Security Agency and NSF-MSP)

This session brings together recent Ph.D.s in the mathematical sciences to present their research. Undergraduate and graduate students as well as these new Ph.D.s. will have the opportunity to further contribute to the expansion of the SACNAS network of mathematicians.

Speaker Chair: Erika Camacho, PhD. *Assistant Professor, Arizona State University* and Stephen Wirkus, PhD *Associate Professor, Arizona State University*

Luis A. Medina, PhD. *Triennial Assistant Professor of Mathematics, Rutgers University*
Karen R. Rios-Soto, PhD. *Assistant Professor, University of Puerto Rico at Mayaguez*
David Uminsky, *Graduate Student, Boston University*
Jessica Zuniga, PhD*, NSF Poctdoctural Fellow, Stanford University*

Statistics in Genetics, Materials Research, and the Environment
Sponsored by the American Statistical Association

What degree can you get that will allow you to make contributions to research in biology, medicine, the environment, astronomy, or the social sciences? In this session, we will demonstrate how statistics is useful in understanding information in genetics, materials science, and the environment.

Session Chair: Keith Crank, PhD Assistant Director, American Statistical Association

Monnie McGee, Ph.D., *Associate Professor, Southern Methodist University*
Alex Trindade, Ph.D. *Associate Professor, Texas Tech University*
Victor De Oliveira, Ph.D., *Associate Professor, University of Texas at San Antonio*

Systems Biology Needs You!

Sponsored by SACNAS (via a grant from the National Institute of General Medical Sciences)

Systems biology has changed rapidly in the last decade. Mathematics has provided a diverse set of computational and theoretical tools. In this session, we will discuss areas of systems biology that have flourished as a result of the richness and diversity of mathematics and highlight areas demanding growth.
Sponsored by: SACNAS (via a grant from the National Institute of General Medical Sciences)

Session Chair(s): Brandilyn Stigler, *Assistant Professor, Southern Methodist University*

Reinhard Laubenbacher, PhD, *Professor, Virginia Bioinformatics Institute, Virginia Tech*
Carlos Brody PhD, *Associate Professor, Princeton University*
Aimee Dudley, PhD *Assistant Professor, Institute for Systems Biology*

Math Gaps and Pipelines: Does Addressing Equity Mean Something More in Mathematics Education?
Sponsored by SACNAS (via a grant from the National Institute of General Medical Sciences)

This symposium outlines the dangers in maintaining a "pipeline" or "achievement gap" focus for advancing Chicanos/Latinos in mathematics. It highlights theoretical frameworks and innovative research that offer greater potential. Findings from several innovative research projects examining issues of identity and power in mathematics teaching and learning will be offered.

Session Chair(s):
Julia Aguirre, PhD. *Assistant Professor, University of Washington, Tacoma*
Rochelle Gutierrez, PhD. *Associate Professor, University of Illinois at Urbana-Champaign*

José María Menéndez Gómez , PhD, *Assistant Professor, Radford University*
Mr. Rodrigo Gutierrez *Doctoral Student, University of Arizona*
Mr. Carlos Lopez Leiva *Graduate Student, University of Illinois at Chicago*

Multidisciplinary Mathematics Addressing Everyday Life
Sponsored by the American Mathematical Society (AMS)

The multidisciplinary session highlights mathematical techniques applied to large complex phenomena affecting our everyday lives. The speakers will discuss using mathematics to model disease spreading in urban areas, light manipulation, growth of tumor cells, and the propagation speed of seismic waves. Everyone is invited.

Session Chair(s): Ricardo Cortez, PhD *Professor, Tulane University*

Session Speaker(s):
Sara Del Valle, PhD.*, Los Alamos National Laboratory*
Alejandro Aceves, PhD. *Professor, Southern Methodist University*
Lisette de Pillis, PhD., *Professor, Harvey Mudd College*

The Impact of Mathematics and Statistics on the Human Condition and Potential
Sponsored by: SACNAS (via a grant from the National Institute of General Medical Sciences)

It is becoming increasingly obvious that Mathematics and Statistics have made important groundbreaking contributions that have impacted the human condition and potential. And their future positive contributions in these directions are unlimited. From statistical methodology to

assess the effect of genes on complex diseases, mathematical techniques for the modeling of complex systems, e.g. modeling, analysis and computation of the function of the heart, blood vessels, and blood flow, the statistical and probabilistic modeling of the electrical power grid, to statistical sampling techniques to provide accurate counts of the population for medical and political purposes, mathematics and statistics have facilitated, motivated, supported and pushed the frontiers of science in general.

Session Chair(s): Javier Rojo, PhD. *Professor of Statistics, Rice University*

Session Speaker(s):
Mr. Joe Fred Gonzalez, Jr, *Mathematical Statistician, National Center for Health Statistics, CDC*
Cristina Villalobos, PhD *Associate Professor, University of Texas-Pan American*
Dr. Leonardo Duenas Osorio, *Assistant Professor, Rice University*

PROFESSIONAL DEVELOPMENT

Mathematics is More Than Counting
Sponsored by SACNAS (via a grant from the National Security Agency and NSF-MP)

Mathematics is More than Counting brings together a group of experienced and inspiring mathematicians in an exciting range of mathematical topics not commonly seen in undergraduate curricula. The session will highlight current and exciting research areas of mathematics for students and professionals alike.

Session Chair(s): Angela Gallegos, PhD*, Occidental College*
Ricardo Cortez, *Professor, Tulane University*

Session Speaker(s):
Karma Dajani, PhD. *Associate Professor, Utrecht University*
Carlos Moreno, PhD. *Professor, City University of New York*
Minerva Cordero, PhD. *Associate Professor, The University of Texas at Arlington*
Victor Moll, *Professor, Tulane University*

PRECOLLEGE SESSIONS

Using Interactive Statistics in Teaching K-12 Science & Math
Sponsored by The American Statistical Association

This workshop will enhance K-12 educators' understanding of statistics and provide interactive activities to strengthen teaching of statistics within the math and science curriculum. Teachers will apply concepts in the GAISE Pre-K–12 Report (www.amstat.org/education/gaise) by exploring problems requiring them to collect, organize, analyze, and draw conclusions from data.

Session Speaker(s):
Keith Crank, PhD. *Assistant Director, American Statistical Association*
Martha Aliaga, PhD. *Director of Education, American Statistical Association*

Mathematics Student Presentations
There were 44 mathematics poster and oral presentations**.** SACNAS considers this opportunity to be an important feature of the conference. All student presentations are judged by at least two professionals and the judges give students helpful supportive feedback about their work and presentation style. This is an important way in which students are initiated into the world of scholarship, preparing them to present at professional conferences within their discipline in the future.

POSTER PRESENTATIONS
The AMS gave each student poster presenter a bag with *Riot at the Calc Exam and Other Mathematically Bent Stories,* by Colin Adams, and some small gifts in appreciation of their work. The following students received awards for mathematics posters.
Cory Colbert, Virginia Commonwealth University, won an Undergraduate Poster Presentation award sponsored by DuPont, for "INVESTIGATION OF THE LOEWNER TRACE"
Laura Strube, University of Texas at Tyler, won an Undergraduate Poster Presentation award sponsored by DuPont, for "MINIMAL SURFACES IN FOUR DIMENSIONAL EUCLIDEAN SPACE"

Andreea Erciulescu, Colorado State University, won an Undergraduate Poster Presentation award sponsored by NSF Mathematical Sciences Institutes, for "SOLVING KAKURO PUZZLES"

Don Tadaya, Arizona State University, won an Undergraduate Poster Presentation award sponsored by the Sandia National Laboratories, for "THE DYNAMICS OF A SPATIAL CYCLIC COMPETITIONS SYSTEM

CONFERENCE ATTENDANCE

The total attendance at the 2009 SACNAS conference was 2,888. The overall attendance of mathematics students and professionals in the last 8 years is shown below. Table 1 shows the number of conference participants that identified themselves in the area of mathematics. The totals include student participants, postdocs, faculty, teachers and professionals and illustrate our strong commitment not only to maintaining a strong mathematics presence at the SACNAS conference, but also to increase our mathematics attendance at future conferences.

Table 1: Mathematics Representation at SACNAS Conferences

Year	Number of Total Math Students	Total Math Attendance	Location
2002	109	147	Anaheim, CA
2003	129	234	Albuquerque, NM
2004	124	249	Austin, TX
2005	164	312	Denver, CO
2006	169	276	Tampa, FL
2007	152	271	Kansas City, MO
2008	150	269	Salt Lake City, UT
2009	146	235	Dallas, TX

Overall, the 2009 SACNAS national conference provided a broad range of highly effective educational, mentoring and networking activities that supported and served the minority scientific community at all levels of the higher education pipeline. These activities benefited all conference attendees and certainly impacted mathematics students equally included opportunities to:

- Engage via *Scientific Symposia* and *Keynote Addresses* with nationally recognized scientific and mathematic role models and mentors.
- Gain professional skills essential for advancement in the sciences and mathematics, including professional development workshops that focused on communication of scientific and mathematical research methods and findings.
- Receive feedback from faculty judging poster and oral presentations and in the process make meaningful connections with prospective mentors.
- Make informed decisions about their professional future and to establish lasting connections with university, government agency, industry, and research organization representatives.
- Engage in structured mentoring activities such as the *Conversations with Scientists* and the *Mathematics Institutes Reception,* where professional scientists, mathematicians and administrators provided essential information to students at all stages of the higher education pipeline, and assisted them to develop an academic and career roadmap that will guide effectively as they navigate their way to professional success in the science and mathematics world.

FISCAL REPORT

The $5,000 of AMS sponsorship was used to fund speakers for one session and student participants as indicated below.

	airfare	lodging	registration	
Dr. Sara Del Valle	257.01	125.35	460.00	
Lisette de Pillis	347.48	250.70	460.00	
Karma Dajani	925.36	376.05	460.00	
Alejandro Aceves	0.00	0.00	275.00	Local
Various students	0.00	0.00	1,063.05	
TOTAL	**1,529.85**	**752.10**	**2,718.05**	**5,000.00**

We note that the amount $1,063.05 in the table was used to support registration fees for undergraduate students who had partial funding from other sources to attend the conference.

Ricardo Cortez
Tulane University
February 20, 2010

Epsilon Awards 2010

Program	Award Amount
All Girls/All Math University of Nebraska Lincoln, NE	**$7,500**
Lamar Achievement in Mathematics Program (LAMP) Lamar University Beaumont, TX	**$10,000**
MathPath Macalester College St. Paul, MN	**$7,500**
PROMYS Boston University Boston, MA	**$12,500**
PROTaSM **(Puerto Rico Opportunities for Talented Students in Mathematics)** University of Puerto Rico, Mayagüez Mayagüez, PR	**$7,500**
Research Science Institute MIT Cambridge, MA **(**Center for Excellence in Education**)**	**$7,500**
Stanford University Mathematics Camp (SUMaC) Stanford University Stanford, CA	**$10,000**
Stony Brook Mathematics Camp SUNY at Stony Brook Stony Brook, NY	**$7,500**
Texas State University Honors Summer Math Camp Texas State University San Marcos, TX	**$15,000**

Program	**Award Amount**
Young Scholars Program University of Chicago Chicago, IL	**$15,000**

TOTAL = $100,000

Ellen J. Maycock
Associate Executive Director
March 18, 2010

To: Executive Committee and Board of Trustees (ECBT) of the AMS
From: Edward Aboufadel, Secretary of AAAS Section A (Mathematics)
Subject: Symposia at the 2010 AAAS Annual Meeting
Date: April 12, 2010

Overview: The AAAS Annual Meeting, considered by many to be the showcase of science, features a variety of presentation formats. In addition to more than one hundred and fifty symposia on themes of contemporary interest, there are individual topical area lectures and plenary lectures. The generous support of the AMS has been centrally important in enabling Section A to offer programs and speakers that communicate to general scientific audiences and the press (and by extension, the public at large) the nature, excitement, and usefulness of mathematics. The 2010 meeting was held February 18-22 in San Diego, CA. On page 113 of the meeting program this year, the support of the AMS was acknowledged.

We appreciate the efforts by the AMS to report on the AAAS meeting, such as at this URL: http://www.ams.org/ams/aaas2010.html. Brie Finegold, a graduate student in mathematics, kept a blog during her attendance at the meeting. Her writings can be found here: http://www.maa.org/news/021910Finegold.html.

In addition to those reports on the eight symposia sponsored by Section A, below are summaries written by leaders of Section A. Included with each report is a list of AAAS Sections (other than Section A) that indicated in the program their interest in the symposium.

1. Real Numbers: Mathematical Technologies for Counterterrorism and Border Security
Saturday, February 20, 2010, 1:30 – 4:30 PM
Organized by: Jonathan Farley (Johannes Kepler University Linz), Tony Harkin, Rochester Institute of Technology, and Anice Anderson, Rose-Hulman Institute of Technology
Report by Keith Devlin

The symposium had an audience of about 75 at the start, dropping slowly to around 50 by the end. Two speakers had to cancel at the last minute due to illness. As a result, Keith Devlin gave an unlisted talk to bring the total number of speakers to five rather than the planned six.

Speaker 1: Gordon Woo, Risk Management Solutions, Quantifying the Benefits of Counter-Radicalization. Mr. Woo began with a general overview of terrorism activity in the UK, where he is based. He said that the intelligence agencies take advantage of sociological and family factors to help track terrorist activities. Mathematical tools include data mining, social network analysis, and website monitoring. He quantified the likelihood that a terrorist plot would be uncovered prior to action at 1 in 20. He gave an overview of the relative frequencies of

different kinds of threats. He pointed out that current surveillance techniques mean that plots involving more than a very small number of agents, such as 9/11, have a very low probability of success. He concluded that the only viable long-term strategy was counter-radicalization, and for this policy he gave a strong endorsement of the policies of President Obama.

Speaker 2: Steve Horton, West Point, Mathematics, Science, and Engineering for Counterterrorism and Counterinsurgency at West Point. Dr. Horton began with a general overview of the research carried out at West Point, and then moved on to a more in-depth look at some of the specific projects that have been completed:

- A hand-held Google street-view device
- Critical infrastructure education
- Concrete protection panels
- Counter IED location analyzer
- A hand-held device to predict where a shell is likely to hit
- A project where cadets were asked to come up with ideas for building an IED, to try to pre-empt such designs by the enemy
- An IED neutralizer
- A statistical analysis of all al Qaeda attacks
- A photonics project to identify the nearby use of a camcorder
- Camouflage against night-vision equipment
- A social network analysis project to analyze network growth using email, etc.
- Analysis of large data sets to discover social relationships

Speaker 3: Paul Tanenbaum, US Army Research Lab, Linking Military Missions with the Means of Accomplishing Them. A major problem facing the development of battlefield systems, which are highly complex, is the disconnect between military decision making protocols and scientists' ways of thinking. The Army has developed the Missions and Means Framework (MMF) to reconcile the two. Tennenbaum described in some detail the features of a system that diagnoses and prognoses the health of a mission as whole, at every stage, in real time.

Speaker 4: Jonathan Farley, Johannes Kepler University, Austria, How to Build a Perfect Terrorist Cell. This talk was almost entirely mathematical (graph theory). The focus was on what kinds of network are robust in the face of the detection and removal of one of more individual nodes.

Speaker 5: Keith Devlin, Stanford University, Analyzing Real Reasoning. Devlin described an unclassified project he worked on for the CIA for several years following 9/11, to provide

systems and protocols to improve the performance of trained intelligence analysts. This involved taking a high-level view of the intelligence analysis process, and analyzing it in a manner analogous to the way classical logic models mathematical reasoning. Although Devlin did develop a formal mathematical model of reasoning with context-dependent information, the main thrust of the project was to look at the domain through mathematical eyes rather than to apply some mathematical technique.

Section interest: Industrial Science and Technology; Information, Computing, and Communication; Societal Impacts of Science and Engineering

2. Mathematics and the Analysis of Fairness in Political Processes
Sunday, February 21, 2010, 1:30 – 4:30 PM
Organized by: Michael Jones (Mathematical Reviews)
Report by Ken Millett

The speakers were Donald G. Saari (UCIrvine), Steven Brams (NYU), Paul H. Edelman (Vanderbilt), Jennifer Wilson (Eugene Lange College), Christopher P. Chambers (CalTech) and, Zeph Landau (UCBerkeley). Michael Jones, the organizer, was also the Discussant.

Saari discussed the meaning of "fairness" in voting, paraphrasing Justice Stewart: "I know it when I see it." But, how does one compare the fairness of voting methods? Methods have been mostly ad hoc. A reasonable goal is long term systematic advances. Typically change occurs when one has examples of how things can go "wrong." Changes, however, often lead to subsequent unforeseen events causing problems.

Brams discussed a possible voting system (approval voting) for multi-winner elections in the face of confusing and contrasting values. Edelman presented the history of apportionment vis-à-vis congressional seats and described the mathematical differences and how we have arrived at the present practice despite objections.

Jennifer Wilson discussed the recent Democratic primary, with a New Hampshire example a principal focus, giving a comparison of proportional method consequences and how fragile the outcome might be under certain circumstance. Chambers presented a measure of bizarreness of a redistricting plan. Landau discussed an example gerrymandering – from Massachusetts in 1812. He looked at area versus perimeter and population density, proposing a path-based metric, and gave instructive examples to demonstrate how complex the problem actually is.

Attendance included Barry Cipra and a fair number of mathematical folks in an audience of about 35 at 1:55PM.

Section interest: Social, Economic, and Political Sciences; Societal Impacts of Science and Engineering; Statistics

3. Sea Ice in the Changing Climate: Modeling a Multiscale Nonlinear System
Friday, February 19, 2010, 8:30 – 11:30 AM
Organized by: Kenneth Golden (University of Utah)
Report by Edward Aboufadel

This symposium was organized by Ken Golden, who was featured last year in the media (including the AMS' Notices and the AAAS' Science) during Mathematics Awareness Month (theme: Mathematics and Climate). He began the session with an overview of the scientific study of sea ice, emphasizing the multiscale structure of sea ice, differences between Arctic and Antarctic ice, and the importance of percolation theory.

Marika Holland (National Center for Atmospheric Research) then gave a presentation on modeling sea ice through different types of differential equations. One type was based on the balance of heat fluxes on the surface of the ocean and at the bottom of the ice sheet. Another equation dealt with the change in ice volume, using an "ice in minus ice out" heuristic, with the "ice out" term including transport of Arctic ice to lower latitudes. A couple of conclusions that come from the models include: (1) models with initially thicker ice have larger ice volume loss, (2) thin ice grows more rapidly, providing a stabilizing effect, and (3) Arctic ice should remain stable during the 2010's, only to suffer rapid loss during the 2020's and 2030's. She noted that shipping companies are very interested in the third result.

The third presentation was by Donald K. Perovich (US Army Corps of Engineers, Cold Regions Research and Engineering Laboratory), and his research is in the feedback loop between the amount of ice and how strongly the ice reflects (as opposed to absorbing) sunlight. This is called the albedo of the ice. The albedo of ocean water is 0.07 (albedo is a unitless measure), which means 7% of the sunlight is reflected, while the rest is absorbed. The albedo of ice is clearly much larger, but modeling is difficult for a number of reasons. One is that the surface of the ice is not uniform, and unpredictable melt ponds in the ice have a much lower albedo. Another is that the albedo varies over the year, matching five phases: dry snow (0.85 albedo), melting snow, pond formation, pond evolution, and freezing. Although the result is an oscillating albedo function, it is not clear when the transition times are from one phase to the next. Using daily data from the Arctic since 1979, the mean annual heat input and the annual ice melt can be calculated. Some conclusions is that there are longer melt seasons, the ice albedo is decreasing

(new ice has a lower albedo than old ice), a layer of more than 10cm of snow will keep albedo relatively constant, and first-year ice melts more evenly because melt ponds are darker. The fact that young ice grows faster, and an increase in clouds, both contribute to the slowing of the rate of ice melt.

Wieslaw Maslowski (Naval Postgraduate School) took a different approach to the question of melting sea ice and observed that trends of the past twenty years cannot be based just on atmospheric effects. In his research, he has been examining the inflow of sea water (and heat energy) from the Atlantic and Pacific oceans into the Arctic. He has identified the shallow Bering Strait as a prime culprit pumping heat into the Arctic, as our two largest oceans are also becoming warmer.

The most mathematically demanding talk of the session was given by John Wettlaufer (Departments of Geophysics and Physics). Dynamical systems were discussed, and Wettlaufer outlined a way to analyze the melting of sea ice through a bifurcation analysis based on a differential equation to model albedo, and another for heat conduction. Basically, once we reach an ice-free situation in the Arctic, to return to a situation of ice all year will be more difficult as it will require a "jump" from one curve on the bifurcation diagram to the other. Wettlaufer then introduced ideas from number theory such as the Hurwitz Irrational Number Theorem, along with the idea of Hausdorff dimension, to explore the question: what is the necessary number of dimensions needed in a model to explain ice cover?

The question of how we can model the distribution of melt water on ice was a key focus of the talk by Hajo Eicken (University of Alaska Fairbanks). He reinforced a key idea from earlier talks, that as the ice cover ages, albedo goes up. Recently, he is exploring how snow depth distribution affects the patterns of the ponds being formed.

The final talk was by Cecilia Bitz (University of Washington). She is interested in including biochemistry into models, and she is exploring the role of algae in the formation and melting of sea ice. First-year ice appears to have more algae, and is higher in salinity. Bitz then described a partial differential equation model for sea ice enthalpy that took into account brine channel transport, thermal diffusion, and conservation of energy. This leads to studying how ice desalinates over time by convection, which brings in marine organisms and nutrients into the ice area.

Attendance first thing in the morning was 40, and went as high as 70 during Maslowski's talk.

Section interest: Atmospheric and Hydrospheric Sciences; Geology and Geography.

4. First-person Solvers? Learning Mathematics in a Video Game

Friday, February 19, 2010, 1:30 – 4:30 PM
Organized by: Keith Devlin (Stanford University)
Report by Edward Aboufadel

This symposium focused on the use of video games in education, with an emphasis on the learning of mathematics. James Paul Gee (University of Arizona) spoke first, beginning with the observation that the traditional paradigm of instruction does not lead to problem solving, but experiences with video games do. In gaming, learning *is* problem solving, but it has also become about designing a community (e.g. World of Warcraft), so the social interactions involved in gaming are critical to learning. Gee noted that asking gamers to first "read the manual" and then play the game doesn't work, as the instructions, without context, are usually boring and inaccessible. Players just start playing, and then they can refer to the manual later, and it is easier to read. He compared this to traditional education, where the game is called "mathematics" or "science", and we are just studying the manual without "playing the game". If we can give situated meanings for mathematics, he concluded, then no one would fail.
Lou Gray (Dreambox) presented software that his company has developed for K-3 Mathematics. They have virtual manipulatives (that look like an abacus, 10-blocks, etc.) that kids think of as games.

Zoron Popovic (University of Washington) started his talk by discussing the http://fold.it web site ("Solve Puzzles for Science") that is helping with research in protein folding, and then turned to the question of teaching fractions. He observed that the learning of fractions is a key bottleneck in the elementary curriculum, and he believes that we do not know the optimal way to teach fractions. His research involves game development that takes into account pupil dilation, gaze tracking, mouse tracking, and other measurable for players, and his research group is developing a game for players to learn fractions using these measures.

The next talk was by Keith Devlin (Stanford University), the organizer of the symposium. He talked about the book *Street Mathematics and School Mathematics*, by Nunes, et.al., in which 98% of kids in a study, working or making purchases at a street bazaar, could do all necessary arithmetic calculations correctly, but only 37% have the same success in at school. These students have an enormous struggle doing mathematics in an abstract setting, and this provides a rationale for creating a game/simulator at the middle school level for students to learn/do everyday mathematics. Devlin has been working with a company for seven years on this project.

Frank Wattenberg (West Point) demonstrated *Tiger Stats*, a video game to teach introductory statistics. He pointed out a pitfall in the use of video games is that "entertainment is about suspension of disbelief, while education is about reflection." He has settled on a model for

incorporating games into learning where the students are involved in building the games. He has developed a class at the college sophomore level where students create games that use physics.

The last talk was by Brianno Coller (Northern Illinois University), and he described a computational methods course he has created for junior-level engineering students. In that course, students need to succeed in a car racing computer game in order to pass the course. The students have to program the car, using computational methods such as control theory, to drive on a course with obstacles. To assess the effectiveness of the course, Coller has analyzed student learning in his class compared to a traditional course on computational methods taught by another instructor. One difference he determined is that students in his course develop a more detailed understanding of the mathematics, and are more engaged in the learning. More students in his course elect to take the second course in the sequence.

Attendance ranged from 40 to 50 throughout the afternoon.

Section interest: Education; Engineering; General Interest in Science and Engineering; Information, Computing, and Communication; Psychology

5. Traffic, Crowds, and Society
Saturday, February 20, 2010, 8:30 – 10:00 AM
Organized by: Nicola Bellomo (Polytechnic University of Turin) and Andrea Bertozzi (University of California)
Report by Bus Jaco, Oklahoma State University

Speakers:
Andrea Bertozzi (University of California), Crowd Modeling and Criminality Crowding
Mehdi Moussaid (Swiss Federal Institute of Technology), Behavioral Mechanisms of Spatial Self-Organization in Human Crowds
Pierre Degond (Paul Sabatier University), Emergence of Self-Organization in Animal and Human Societies

This Symposium focused on mathematical modeling of large group dynamics for animals, humans, and vehicles. The attempt is to understand collective behavior of various group systems leading to a mathematical description of the collective dynamics. The modeling takes into account individual interactions and how they lead to self-organizing and overall dynamics. The Symposium drew a nice crowd that varied between 65-70 individuals. There was keen interest and a lively discussion session at the end of the presentations.

Andrea Bertozzi discussed the cluster effect of criminality, gangs, and terrorist IED attacks in Iraq. These models broaden the use of crowd and traffic modeling to clustering effects in behavior. The simulated data of these models correlates well with actual data; much of the actual data came from criminal and gang data gathered in Los Angeles. This talk was the most developed and the topic had a lot of curious aspects leading to more than half of the questions in the discussion session following all presentations directed at this topic.

Mehdi Moussaid presented a very interesting study of how human movement is organized from small groups of individuals moving together to large crowd movements. There were models that depicted movement related to crowd density. The models represented actual photographed crowd scenes and were not surprising: groups move more smoothly in low density, stop-and-go in higher density, and have extreme turbulence in very high density. Particularly for design purposes, geometry is being introduced to develop shapes that avoid dire consequences in high density crowds.

Pierre Degond spoke about self organization in animal and human societies. The movement exhibits local interaction but develops large-scale structures. There are no leaders. Examples were given of vehicular movement, pedestrian movement, and recurrence of economic cycles. Animal models still provide the best resources as it has become necessary to inform humans that they are under observation, which affects their behavior.

The session retained the interest of the audience with little movement between talks and over 50 staying for the discussion following the presentations.

Section interest: Engineering; Information, Computing, and Communication; Social, Economic, and Political Sciences; Statistics.

6. Moving Across Scales: Mathematics for Investigating Biological Hierarchies
Sunday, February 21, 2010, 8:30 – 11:30 AM
Organized by: Louis Gross (NIMBIOS)
Report by

Speakers:
Sally Blower (University of California), Designing Rollout Plans for HIV Interventions in Africa Using Optimal Control Theory
Carlos Castillo-Chavez (Arizona State University), Life in the Fast Lane: H1N1 Pandemic Dynamics in Mexico's Central Influenza Corridor
Gerda de Vries (University of Alberta), Bursting: A Case Study in Multiple-Scale Modeling and Emergent Behavior

Philip J. Holmes (Princeton University), The Neural Dynamics of Decision-Making: Multiple Scales in a Single Brain
Claudia Neuhauser (University of Minnesota), Space and Disease: Insights from Interacting Particle Systems
John Tyson (Virginia Polytechnic Institute and State University), Molecular Network Dynamics and Cell Physiology

The objective of this Symposium was to present recent work by researchers who have used multi-scale mathematical approaches to provide novel insight for diverse levels of biological organization. A particular challenge in mathematical modeling of biological systems is the multiple scales of interaction and the hierarchical, modular nature of biology at all levels from that within the cell to that of an ecosystem. The Symposium brought together leading researchers whose mathematical efforts involve multiple scales, to discuss methods to determine the emergence of properties of aggregated systems from that of the components. The approach throughout was to link mathematical and computational models for the various hierarchical levels discussed with available data and use model results to make inferences concerning basic and applied biological questions. A brief summary of the talks follows:

Sally Blower of the UCLA Geffen School of Medicine discussed her efforts to develop and apply mathematical models to effectively prevent the spread of HIV, using data from Botswana. The focus of this effort is on intervention strategies using pretreatment by antiretroviral drugs. The strategy is to first develop a transmission model for the spread of the disease, linked to a model for the potential evolution of resistance to the drug. The transmission model was linked to data on spatial variation in prevalence and incidence, which served as the basis for an optimal allocation model utilizing spatial risk maps. While maintaining equity in access, the objective is to maximize the number of infections prevented.

Carlos Castillo-Chavez of the Mathematics and Biology programs at Arizona State University presented mathematical models for the spread of H1N1, with a focus on data from Mexico. An objective was to determine how spatial wave patterns arose and how these relate to transportation and social contact networks. In the process, it was feasible to determine the level of vaccine usage and distribution that was effective, and derive optimal integrated approaches to disease spread that involve combinations of vaccines and social isolation methods. A main conclusion was that Mexico did a superb job in effectively responding to this disease emergency.

Gerda de Vries of the Mathematics Department at the University of Alberta presented a concise overview of cell bursting and how multi-scale modeling can explicate this emergent phenomena. The models apply to different nerve cells as well as endocrine cells, with models used to address basic biological questions at single cell level as well as coupling between cells. She presented

ordinary differential equation models that incorporate multiple time scales and lead to bifurcation diagrams to illustrate the emergence of bursting phenomena under appropriate parameter values. The model was then related to data both within and between cells with one conclusion being that heterogeneity of cells enhances bursting under strong coupling.

Philip Holmes from the Applied Mathematics program at Princeton presented multi-scale approaches to investigate neural decision-making, emphasizing perceptual models for the brain. This involved the use of sequential probability tests to analyze data on perception and led to a stochastic differential equation that was used as a basis for signal detection mechanisms. He showed how this model could be expanded to link ion channel models of neurons and how it was feasible to reduce a model involving thousands of differential equations to a mean field model with about 10 equations. The smaller model preserved much of the behavior of the more complex model and was usable in analyzing behavioral tests of human subjects indicating that the decision process was not optimal.

Claudia Neuhauser of the University of Minnesota discussed multi-host, multi-symbiont spatial systems with emphasis on how different types of models can be applied to data on E. coli and associated viral pathogens. The models included non-spatial epidemiological models, spatial deterministic models using partial differential equations, and spatial interacting particle system models. As these models developed, it was critical to link to new experimental data and evaluate the hypotheses arising from the variety of models. The models were shown to provide insight into issues such whether pathogens or mutualists enhance or retard host clustering.

John Tyson of the Biology program at Virginia Tech discussed the use of models for analyzing the mechanisms of the control of the cell cycle as one of the goals of molecular cell biology. He illustrated the use of ordinary differential equation models to consider alternative levels of detail in cycline B regulation of the cell cycle, and how this may lead to a bistable switching mechanism. An objective of this scale of model is to compare general properties of the system to data and he noted that data on budding yeast cell cycle has indicated two stable steady-states arise, as predicted by the models.

Approximately 50 people were in attendance throughout the talks and many audience members offered a variety of interesting observations and questions following these presentations. The discussion period included a request to the speakers to provide suggestions as to how to educate students in the use of multi-scale approaches in biology, with suggestions including: let the student choose the problem based upon their interests, encourage the students to start with data rather than mathematics, encourage math students to attend biology conferences, and encourage mini-research projects connecting groups of students with different backgrounds. Several speakers met with members of the science media following the Symposium.

Section G (Biological Sciences) co-sponsored this symposium and paid for travel costs for half o the speakers. Other interest: Information, Computing, and Communication.

7. TIMSS 2007: Exploring the Dramatic Improvements in Performance in Two States
Saturday, February 20, 2010, 3:30 – 5:00 PM
Organized by: Patsy Wang-Iverson (Gabriella and Paul Rosenbaum Foundation)
Report by John Ewing

The speakers were Patrick Gonzales (US Department of Education), Mike Lindstrom (SciMathMN), and Barbara Libby (Massachusetts Department of Education). Attendance started at 19 and drifted up to 28, then down again as the session went on.

Patrick Gonzales began with an overview of TIMSS and a methodical presentation of results from 1995, 1999, and 2007 tests, showing US scores as well as the scores of other countries taking the mathematics and science TIMSS tests. Most recently, both Minnesota and Massachusetts have participated as "mini-nations" so that test results could be reported for each state. Minnesota did so in 1995 as well, but Massachusetts had only recent data. The presentation went through results for 4th grade mathematics, 8th grade mathematics, 1995 vs. 2007 comparisons, benchmark (proficiency) data for each, and then repeated all this for science.

Mike Lindstrom talked about improvements in the Minnesota TIMSS scores, repeating some of the reported data, and then conjectured what changes had led to the improvements, including new state standards (which realigned the curriculum with the TIMSS test).

Barbara Libby talked about the recent results for Massachusetts, also repeating some of the reporting, and conjectured why the Massachusetts scores seem to be significantly higher than the US in general. One major reason seems to be that the Massachusetts standards are now rigorously enforced, and that they align almost perfectly with the TIMSS test.

The session ended with questions and some observations from the audience.

Section interest: Education.

8. Can Singapore Mathematics Enhance Student Learning in the United States?
Monday, February 22, 2010, 9:45 – 11:15 AM
Organized by: Patsy Wang-Iverson (Gabriella and Paul Rosenbaum Foundation)

We were not able to get a report on attendance at this session. Here is the information about the session from the program:

Speakers:

- Patsy Wang-Iverson (Gabriella and Paul Rosenbaum Foundation), Teacher Preparation to Support Student Learning
- Richard Askey (University of Wisconsin), Examining the Coherent Scope and Sequence of the Singapore Mathematics Curriculum
- Banhar Yeap (National Institute of Education, Singapore), How Can You Slow Them Down If You Want Them To Catch Up?
- Discussant: Perla Myers, University of San Diego

Education serves as a vital bridge between science and society. As a way to improve mathematics and science education, an increasing number of voices are calling for international benchmarking. A desire to look to other countries' practices was catalyzed by the Third International Mathematics and Science Study (TIMSS), which included a detailed curriculum analysis. A summary of mathematics topics taught in grades 1–8 in the top six performing countries revealed a similarity in scope and sequence. Of these countries, only Singapore conducted instruction in English, which facilitated its adoption in the United States. Over the past 10 years, an increasing number of individuals, schools, and school districts have adopted what they understand to be the Singapore mathematics (SM) curriculum. It has been formally approved for adoption with modifications in California and in use in a number of districts and schools around the United States. SM frequently is equated with a method of solving word problems, the bar model. This symposium will describe the careful scope and sequence of the SM syllabus, the mathematics concepts students learn, ways in which all students can learn mathematics to high levels, and how individuals are prepared to become teachers.

Section interest: none.

MINUTES OF MEETING BY TECHNICAL MEANS

BOARD OF TRUSTEES
AMERICAN MATHEMATICAL SOCIETY
JANUARY 28, 2010

Members present: George Andrews, John B. Conway (Chair), John M. Franks, Eric M. Friedlander, Linda Keen, Ronald Stern, Karen Vogtmann, and Carol S. Wood.

Don McClure sent information to the Board on January 22, 2010 about an additional capital request for completing implementation of Epicor financial software at the AMS. The summary information and capital request is included as Attachment 1 (memorandum from Gary Brownell and Constance Pass). Memoranda detailing the need for the additional capital request were available for inspection by the Board in a secured area of the AMS website.

Pursuant to the approved procedures for a meeting by technical means, Treasurer John Franks initiated the call for such a meeting on January 22. The call for the meeting was sent by email to the email alias bt-plusatams.org on the same day and the meeting was conducted by email. There is one item on the agenda: Capital request for completing implementation of the Epicor financial software.

Board secretary Karen Vogtmann made the following motion.

Motion: The Board of Trustees approves spending up to an additional $72,000 for completing implementation of Epicor financial software. This amount increases the 2007 authorization of $458,202 to a new upper bound of $530,202. This $72,000 increase includes $60,000 to complete Epicor's installation services and $12,000 as a contingency for unanticipated out-of-scope work as described in the memo of Gary Brownell and Connie Pass attached hereto.

The motion was seconded by Eric Friedlander. Discussion and voting were scheduled to end on Thursday, January 28 at 8 a.m. By that time, all members had voted by email. The result of the vote was unanimous approval of the capital request.

Minutes prepared by Karen Vogtmann
Secretary, Board of Trustees

This memorandum includes two attachments: (1) standard AMS Capital Purchase Authorization and (2) agreement letter dated December 15, 2009 from Gary Brownell to David Fogel at Epicor Software.

AMERICAN MATHEMATICAL SOCIETY

To: Board of Trustees
From: Gary Brownell, Connie Pass
Subject: Authorization of additional costs to complete the Epicor project
Date: January 22, 2010
Cc: Karen Mollohan, Don McClure, Tom Blythe

We are requesting that the BT approve additional expenditures relating to the implementation of financial software originally approved in December of 2007. That initial approval authorized the following costs[1]:

Software and maintenance	$175,455.04	$29,242.49	$204,697.53
Discount	(46,495.58)		(46,495.58)
Net after discount	128,959.46	29,242.49	158,201.95
Implementation Estimate			197,580.00
Consulting fees			75,000.00
Total Cost, before contingencies			430,781.95
Contingencies (implementation)			27,420.00
Total estimated maximum cost			**$458,201.95**

The implementation and contingency part of this totals $225,000.

For a number of reasons (see below), the cost of the implementation has exceeded the original estimate and there is still significant work to be done. Several months ago, we suspended work to negotiate final costs to complete the project on a fixed fee or not-to-exceed basis.

We are now asking approval to spend up to a total of $285,000 ($60,000 more than currently authorized) to complete the implementation on a fixed fee basis. In addition to the fixed fee authorization, we believe it is prudent to include a contingency for out of scope work that may be necessary for optimal installation. We are asking for authorization of a contingency amount of $12,000 to cover out of scope consulting time and expenses. ***The total increment that is currently requested totals $72,000.*** This makes the revised total that needs to be authorized for the implementation $297,000, and a total authorized project cost of $530,201.95.

Status summary.

Work of this sort is typically done on a time and materials basis, with an understanding that:

- The client and the vendor have a common and realistic understanding of the work that is needed to be done.
- The client will provide resources (technical and personnel) necessary for the vendor to do the implementation.
- The vendor will plan and execute the job with adequate planning and using qualified personnel.
- It is not possible to anticipate all possible contingencies.

[1] A copy of the December 2007 documentation is available on the BT website at: http://www.ams.org/ecbt/2007-epicor-request.pdf

We entered the negotiation with the hope that Epicor would recognize its share of responsibility in the cost overrun. In our opinion, Epicor Consulting's share of responsibility for the cost overrun includes lack of planning and adequate oversight on the project and a lack of thorough understanding of all components being implemented residing in the Epicor Project Manager assigned. Additionally, travel costs were not included in the original implementation estimate, and we were told New England resources would be assigned, thus minimizing travel costs. However, assignments are subject to a great deal of variability, and the resources assigned to us came from as far away as Mexico, Florida and Colorado. Invoices rendered to date include travel expenses and travel time totaling $32,792, which is in excess of the entire contingency amount built into the project budget as originally approved by the BT. While there was never uttered by anyone from Epicor any acceptance of responsibility for any of the problems encountered during the implementation and the resulting cost overrun, we believe the negotiated settlement presented herein for your approval implies such general acceptance. More financial details of the settlement are included below. We recognize that AMS bears some responsibility for cost overruns (lack of sufficient personnel resources to assign to the project and lack of thorough understanding of a new technical environment, for example). We also recognize that even good faith estimates can be wrong.

The final agreement attempts to balance the interests and responsibilities of both parties. Epicor has agreed to a cap on the total cost, including both time and expenses. The agreement specifies all aspects of the implementation that require additional work, in as much detail as AMS and Epicor can specify at this time.

Key aspects of final agreement.

Apart from the specifics of what work needs to be done, key aspects of this agreement include:

- The total cost for this project shall not exceed $285,000.
- The project includes the following:
    - All services provided by Epicor to date.
    - All services provided by subcontractors to date.
    - All services necessary to be provided by Epicor or subcontractors to complete the project according to the requirements included in Appendix 1 of the agreement.
- A payment schedule as follows:
    - An initial payment of $35,000.
    - Additional Epicor invoices will be paid as they are submitted to the AMS (to a maximum amount of $12,052.11).
    - A final payment of $20,000 after AMS has accepted the implementation project as satisfactorily complete (see deliverables and outcomes in Appendix 1 of the agreement).

Financial summary.

The table below shows the actual billings from Epicor, estimates of their additional time and expense at standard rates, estimates of work they've already done at no charge, and total AMS payments as specified by the new agreement:

Total payments to date	$217,947.89
Invoices not yet paid	$58,867.58
Total Epicor billing	$276,815.47
Estimated additional Epicor costs (labor and expenses)	$59,000.00
Total potential charges	$335,815.47
Estimate of work already done without charge	$34,440.00
Total Epicor "investment" in project	$370,255.47
Settle amount	$285,000.00
Epicor paper loss	$85,255.47
AMS cost overrun	$60,000.00

From Epicor's point of view, they are foregoing about $85,000 in billings. From AMS's point of view we are paying $60,000 more than we expected to. We don't believe we can get a better deal than this without recourse to the legal system and an indefinite delay in completing the project.

As noted previously, we have also added an additional $12,000 to the settlement amount to cover out-of-scope work that may be desirable to achieve more efficient operations in the Fiscal or other departments, for a total potential cost overrun of $72,000 and a total revised project cost of $530,201.95.

Attachments:

- Capital purchase form
- Our proposal (December 15, 2009 letter to Epicor)

AMERICAN MATHEMATICAL SOCIETY
CAPITAL PURCHASE AUTHORIZATION

Date of request..... 1-21-10

Amount of purchase..... Additional Epicor implementation costs $72,000.00

Brief description of purchase:

This is a supplement to the Capital Purchase Authorization dated 12-19-07 for $458,201.95

Has this item been described in the capital purchase plan for this year (yes or no)? .....

Does this item require a service contract after the warranty expires (yes or no)? .....

SOD only: Allocation category 402

Expenditure type. In general, why is this purchase requested? (Check all reasons below)

_____1. Save money.
_____2. Generate additional revenues.
_____3. Replace an existing, essentially similar asset.
_____4. Provide a resource without which business cannot be conducted.
_____5. Provide a resource necessary to carry out an action or policy required or approved by the ECBT, but which otherwise does not meet one of the above criteria.
_____6. Improve product quality or working conditions, but the financial and operational benefits are difficult or impossible to calculate.

Documentation. The documentation for all expenditures should include **a description of the need for the purchase** and **a description of the item** to be purchased. A purchase order or requisition should also be included. The documentation described below should also be attached:

Expenditure type 1	Cost/benefit analysis and memorandum discussing other relevant issues (see BT proposal).
Expenditure type 2	Items listed above and business plan.
Expenditure type 3-5	Memorandum discussing other relevant issues.
Expenditure type 6	Same as 1, except that the benefits will be largely qualitative rather than quantitative.

Approvals and Reviews. All expenditures require approval of the applicable AED and the Deputy Executive Director. Expenditures of $10,000 or more require Executive Director approval. Expenditures of $100,000 or more require BT approval. **All requests for computer-related expenditures require review by the Manager of Systems & Operations.**

Constance W Finn Requested by	1/21/10 Date	After all applicable signatures are obtained, return original to Fiscal (DJM) for distribution of copies as follows:
_____ Approved by applicable AED	_____ Date	
Shannon Dodd Reviewed by Mgr. of Systems & Operations (if applicable)	1/21/10 Date	Fiscal (DJM) - original Facilities - copy, with attachments
Gary S Ramsay Approved by Deputy Executive Director	1/21/10 Date	Fiscal (CAM) - copy, no attachments
Donald E. McClure Approved by Executive Director (if applicable)	1/22/10 Date	Requesting Mgr – copy, no attachments

Updated: September 17, 2008

AMS
AMERICAN MATHEMATICAL SOCIETY

201 Charles Street, Providence, RI 02904-2294
Phone: 401-455-4000, Fax: 401-331-3842
www.ams.org

Gary G. Brownell, Deputy Executive Director
Phone: 401-455-4150, E-mail: GGB@ams.org

December 15, 2009

Mr. David Fogel
VP of Professional Services
Epicor Software Corporation
18200 Von Karman, Suite 1000
Irvine, CA 92612

Re: Open Receivable Balance

Dear David:

I apologize for taking so long to reply to your September 30 letter. It took quite a while to get all the information gathered and put into a form that would be clear to all the parties now and in the future.

In general, we like your proposal, but we need to make certain modifications. These modifications are required partly to satisfy our Board of Directors and partly to insure that no further negotiations of this type will be necessary.

The modified proposal

I. The total cost for this project shall not exceed $285,000.

The total cost of the project includes all of the following:

- All payments made to Epicor to date.
- All outstanding receivables.
- All future invoices for services.
- All future invoices for expenses, including travel.

The project includes the following:

- All services provided by Epicor to date.
- All services provided by subcontractors to date.
- All services necessary to be provided by Epicor or subcontractors to complete the project according to the requirements included in Appendix 1.

A total of $217,947.89 having been paid as of this date, a maximum of **$67,052.11** remains to be paid for the complete project under this proposal.

$285,000 is very close to the number that we understand you to be proposing. It is, however, essential for us to have a firm fixed price because of our approval process for capital expenditures.

II. AMS Requirements for Completion of Epicor Project

Appendix 1 includes details of all items remaining to be done with this project. All existing SOWs are considered to be included in the Appendix and to be covered by the cost listed in I above.

III. Payment Schedule.

An initial payment of $35,000 shall be due immediately following the later of Epicor's submission of a Project Completion Plan as described in Requirement 1of Appendix 1 or the date on which the AMS Board of Directors approves a request for funds to complete this project as outlined in this letter.

Additional Epicor invoices will be paid as they are submitted to the AMS, subject to the provision that AMS will hold back up to $20,000 pending satisfactory completion of the project, including all matters described in Appendix 1. The AMS will have three weeks following Epicor's written report that the project (including all punch list items) is complete to review all work done and submit any additional punch list items for completion by AMS.

IV. Inconsistencies with original engagement letter dated December 21, 2007.

Any inconsistencies between the terms of this proposal and the terms of the original engagement letter shall be resolved in favor of this proposal.

This proposal assures that both parties are working together to address both the open receivable balance and any disputes regarding those balances, as well as all remaining items necessary to complete the project and continue into the future with a constructive relationship.

My signature indicates the commitment of the AMS to follow through on this basis as soon as authorized by our Board of Trustees.

Please add your signature below to signify Epicor's commitment to follow through on this basis so that we may seek our Board's approval.

Very truly yours,

Gary G Brownell

Agreed to and accepted: Epicor Software Corporation

By: _____

Name: David Fogel

AMS Requirements for Completion of Epicor Project

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
1	**Administration** Provide a detailed project completion plan	Epicor		**Project Completion Plan.** Provide a detailed list of issues and open items (including all the AMS requirements listed in this Appendix) showing set dates of completion.
2	**Administration** Provide documentation of all modifications (including any modified Crystal Reports)	Epicor: McGrady		**Documentation of Modifications** Provide a document listing and explaining all modifications that were made to any programs, scripts, screens, reports, etc.
3	**Administration** Provide and review system blueprint	Epicor: McGrady	Already received AP, AR, CM, GL documents, but they have not been reviewed.	**Design and Production Blueprints** Provide a review of the detailed design and production blueprints created by Steve McCool for the AP, AR, CM, GL modules. Provide and review similar documents for all remaining modules (including non-core financials): • Royalties, • Purchasing (and related Inventory and Sales Order), • Star Project Accounting, Epicor will ensure that Altec provides the required documentation.
4	**Active Planner** Provide user access to Test and Production configurations	Epicor: McGrady AMS: Systems		**Confirmation and Testing** Confirm that new users can be added to the TEST and PRODUCTION instances after application is installed on VM with NT authentication in an AD environment. We have been getting an error "Error 52 Retrieving Registration Information" and "Invalid Registration".
5	**Active Planner** Perform clean install, test, release	Epicor: McGrady AMS: Systems	AMS expectation is that Epicor will either do the install or be an active participant in the install in such a way that we can create	**Active Planner Installation and Documentation** Provide documentation of a fully installed, configured and tested TEST

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
			documentation of the process and learn how to do installs in the future.	and PRODUCTION instance of the Active Planner on VM with NT authentication in an AD environment. This may be either a Visio or 1 page document outlining installation.
6	**Active Planner** Provide access to online Help function	Epicor: McGrady		**Confirmation and Testing** Confirm that users can access the online Help function from within the TEST and PRODUCTION instances after application is installed on VM with AD environment.
7	**Active Planner** Complete open training concepts	Epicor: Cooper	AMS staff will review manuals before the session (adequate notice required).	**Documentation and Training** Adequate knowledge transfer to be able to build plan sheets necessary for AMS budgets. This may be accomplished with a 1 day remote refresher training with Nancy Cooper.
8	**Active Planner** Design plan sheets for projects w/ref codes (allocations); Sal & Benefits (incl dept salary detail)	Epicor: Cooper		**Documentation and Training** As above - give AMS adequate start so that small changes in depts will flow through allocations automatically. This may be accomplished with two hours training on Plan Sheet setup for Ref Codes.
9	**Adv Allocations** Perform clean install, test, release	Epicor: McGrady AMS: Systems	AMS expectation is that Epicor will either do the install or be an active participant in the install in such a way that we can create documentation of the process and learn how to do installs in the future.	**Advanced Allocations Installation and Documentation** Provide documentation of a fully installed, configured and tested TEST and PRODUCTION instance of Advanced Allocations on VM with NT authentication in an AD environment. This may be accomplished with either a Visio or 1 page document outlining installation.
10	**Adv Allocations** Complete clean up of old formula and test allocation data	Epicor: Leggett	Confirm with Connie Pass the old allocations to remove and remove same.	Module will contain a clean library of only the Allocations and Formulae currently in use. Epicor will remove any Allocation data that is no longer needed in current environment under this settlement.

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
11	**Adv Allocations** Provide complete explanation of formulas (tracing to source, etc w/Connie Pass)	Epicor	Connie will document the precise meaning of the formulae and how those allocations that use more than one formula work, based upon discussions w/Terry and guidance. Epicor has yet to allocate time for this. It should be noted that the majority of Deb Anastasio's work on this module had to be scrapped and her simplest of formulae (other than perhaps the MI departments) never worked. Mark Leggett's redo of her work was appropriately Epicor's responsibility. Epicor has invoiced AMS for Chris Wu's completion of the STAR script to post labor allocations from STAR to GL, effectively removing these from Advanced Allocations. AMS has paid for these dept's allocations twice. AMS expects Terry's explanations to be FOC.	**Documentation of Advanced Allocation Formulas** Provide complete explanation of formulas (tracing to source, etc w/Connie Pass). We need an 'English" translation of what the formulas are doing. AMS will complete the documentation. This may be accomplished with 2 hours for training on Formulas for Allocations.
12	**AP** Change setting so that vendor name/description is passed over to GL	Epicor: McGrady	AMS needs to know how to do this sort of change (selecting item not on populated list)	Provide a setting or configuration change that provides more meaningful AP detail information to non-Fiscal users. Currently they see Vendor Code and Description when they drilldown in FRx Launcher.
13	**AP** Create explorer view to facilitate credit card suspense account reconciliation	Epicor: McGrady		Provide an explorer view so that the various cash accounts can be viewed as well as the detail for the transactions. We should be able to filter on the cash account and applied date to create the view.
14	**AP** Complete Scribe Migrate installation	Epicor: McGrady	Steve McCool could not get the software to work and was unsure it was properly installed	Provide sample format and training on the use of Scribe Migrate

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
15	**AP** Vendor upload never completed properly so that name for vendor in Vendor_name table shows as: “Smith, John” or “Michigan, University of” and the vendor's name as printed on checks is done so as: “John Smith” and “University of Michigan”.	Epicor	CONNIE PASS was unaware this problem still existed until 10/8/09. Throughout all the revisions to the AMS vendor upload file, made necessary because the instructions given to AMS staff did not result in completion of AP tables as expected or desired, neither Tom Connolly, Bernardo Enciso, or Deb Anastasio was able to determine the proper way for the template to be completed and instruct us in that completion and/or upload the template into the AP module to obtain the desired, and industry standard, result. This was something Tom said 'would be fixed later' and "later" never came. The way the AP module is currently configured to work with its data tables, in order to have the payee print properly on the checks, we must enter the vendor as "John Smith". This means that all payments to Mr. Smith are found in the J's, not in the S's when searching - which is NOT INDUSTRY STANDARD. Clearly, something was not set, configured or populated properly from the outset by Epicor, and this MUST be FIXED. This was a disastrous area from the outset, our questions of 'don't we need this...or that'...were constantly brushed off. AMS expects the correction of any configuration problems in the module and correction of the data in the vendor data tables to be FOC.	Fully functioning AP system that interfaces seamlessly with GL and that meets industry standards and best practices for naming/sorting of vendors and allowing for entry of specific payee vendor name that may be different from vendor name for alpha purposes.
16	**AP** Review/audit current Purchasing thru AP process flow	Epicor AMS: Fiscal		Confirm efficiency of current processes and utilization of applications or provide recommendations to enhance efficiency based on audit/review.
17	**AR** Process walk through	Epicor		Confirm efficiency of current processes and utilization of applications or provide recommendations to enhance efficiency based on audit/review.
18	**Bus. Intelligence** Implement	Epicor		**Business Intelligence Installation and Documentation** Functioning BI system with standard or typical cubes/reports established and basic training delivered to Fiscal staff.

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
19	**Doc-Link** Implement	Epicor		**Doc-Link Installation, Training, and Documentation** 1. Clean Installation of doc-link in a VMWare/Windows/Active Directory environment. 2. Installation of doc-link Epicor Integration to Epicor Accounting package, including GL, AP, and Purchasing 3. Configuration of doc-link package for the AMS Environment 4. Installation and configuration should be performed with AMS technical personnel present to allow knowledge transfer and to allow AMS to document the installation and setup process 5. User training in doc-link and in doc-link/Epicor integration 6. doc-link User Documentation 7. doc-link Technical Documentation
20	**FRx** Set up and document FRx security	Epicor: AMS Fiscal		**FRx Security Documentation** Document with instructions on establishing access security to reports or report components.
21	**Information Services** Port database, application and modules to VMs (some modules will require clean install)	Epicor AMS-Systems	This was previously a separate SOW. This should include any clean-up that is remaining. We agreed to a clean install of the OS only (not of the application) but there are still things that we feel should be cleaned up. • Move the existing databases (.mdf and .ldf files) from the C: drive to the R: drive (the R: drive was the location originally given for all databases to live) • Remove the user accounts that were setup for the demo database	**Port Items to VMs** Move eBackOffice application and existing modules to VMs. The VMs have different IP addresses and server names than the existing SQL and Terminal Server that are currently running the EPICOR applications. Active Planner and Adv Allocations will require a clean install once AD is implemented. These are addressed in a separate line item. Port database to VM. There is also clean-up that needs to be done from initial installation. Move the existing databases (.mdf and .ldf files) from the C: drive to the R: drive (the R: drive was the location originally given for all databases to live). Remove the user accounts that were setup for the demo database.

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
22	**Information Services** Provide guidance on migration to Active Directory	Epicor		Migrate Epicor application and modules to Active Directory. Migrate the desktop used for check printing to Active Directory.
23	**Information Services** Provide training on creating accounts and assigning privileges in Epicor and Star	Epicor AMS-Systems	**Close:** Complete	N/A
24	**Information Services** Provide and review Disaster Recovery Guide to rebuild after a crash	Epicor AMS-Systems		**Documentation and Review** Provide and review Disaster Recovery Guide for restoring the application and databases in the case of a system crash.
25	**Information Services** Set up a maintenance plan	Epicor AMS-Systems		**Documentation and Review** Provide documentation on Epicor "best practices" for SQL maintenance plans. Includes: • Log backups to run several times daily • Database snapshot to run daily • Re-index and integrity checks to run at best practices
26	**OPD interface** Create an error writing script so file won't be overwritten in staging table	Epicor	**Close:** It will not be necessary to create an error writing script so that the file won't be overwritten. If we accidentally overwrite the file all you have to do is bring the file in again. As long as only one person is doing the closing process in a given month it shouldn't be a problem.	N/A
27	**STAR Project Acct** Respond: How to set up user and change password (SQL Login properties on the SQL Server)	Epicor	**Close:** Complete	N/A

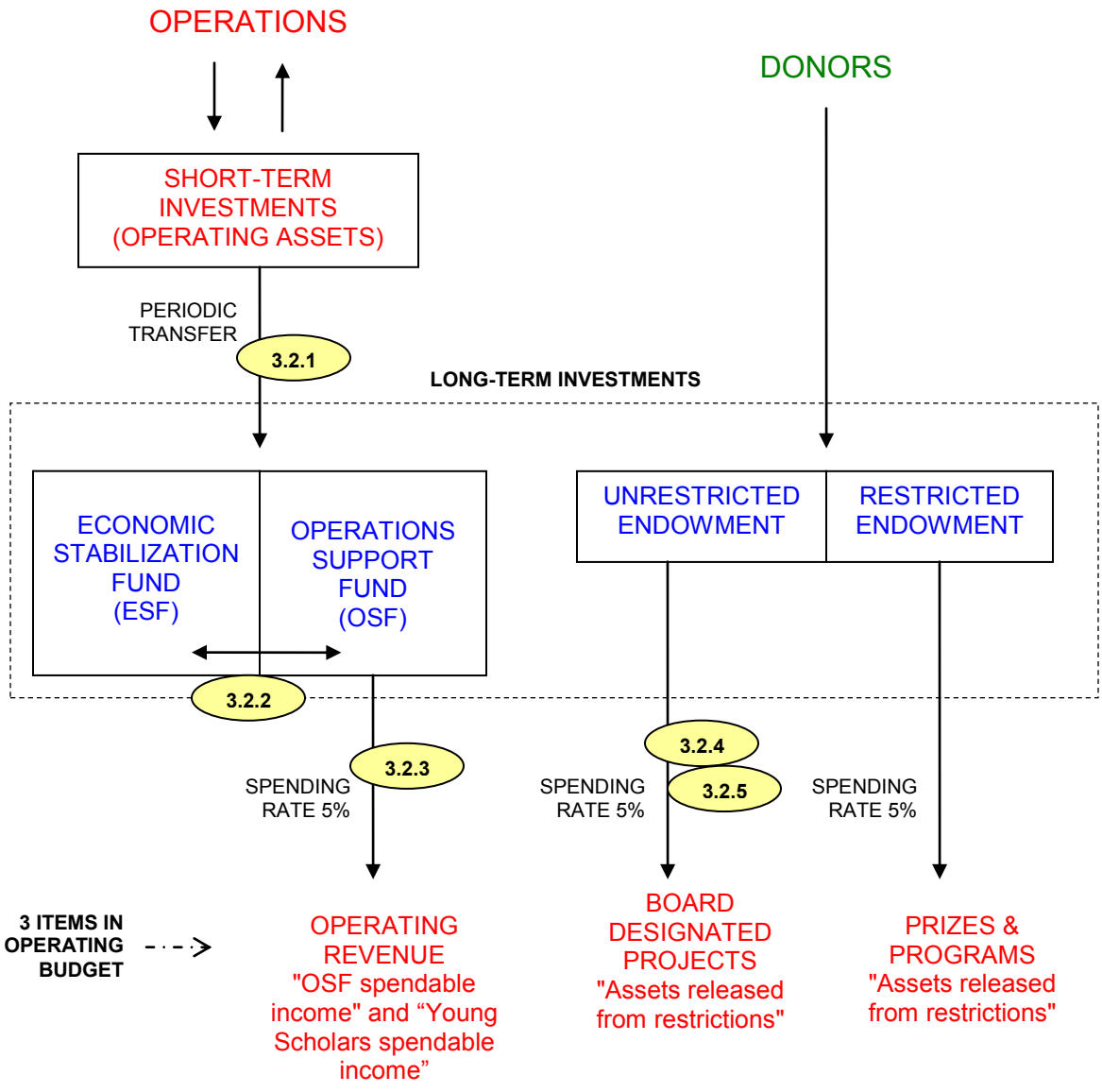
Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
28	**STAR Project Acct** Respond to remaining Star Web User concerns	Epicor	Provide corrected Timesheet Authorization Report. The report was fixed to return the correct data, but the length of the client field should be expanded so that the text doesn't wrap when the client AMS is selected. This wrapping causes extra lines to appear making the report longer and more difficult to use.	Timesheet Authorization Report that is accurate and easily read/understood
29	**STAR Project Acct** Get journal entry data from Jan-June 2009 into STAR	Epicor	Provide better method to get journal entry data from Jan-June 2009 into Star. I do not want to post some of the journal entries already in Star, because they are duplicates of what is already in STAR. Chris had not built out the stored procedure when we had to go live, so he extracted from the STAR database the timesheet information we needed to be able to record the labor costs to the GL for the first few months. These went in as "AJE's" to the GL and they have made their way back over to STAR for posting in those months. I will have to identify them and delete each of the journal entry lines...so I will need to know how to do this inside STAR. It would be a more efficient approach if all the Journal entries currently in STAR thru July were deleted, and the script to identify and report the GL journal entries not in STAR (all but SP journals) were rerun. Reviewing one list and deleting those entries that would duplicate entries already in STAR in a format with which I am familiar (Excel) to create the final file for moving to STAR for posting would be an approach far less likely to result in errors on my part than the current approach.	This item will be satisfied by Epicor providing 2 to 4 hours of hands on training and consultation on processing issues with Connie Pass.
30	**STAR Project Acct** Create special reports for users (CA Unit needed)	Epicor AMS	We'd like to have something that looks like the old CA Unit report that totals up the hours charged out of each department by project. Star focuses on the resource (person) and totals the	**Special Star Report** Report of YTD and previous years labor hours charged, sorted by (1) Dept (Resource Group); (2) Project total and (3) each phase within the project. This is

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
			projects for each person, but I haven't been able to get a project report for an entire department as yet without exporting all the detail to excel and deleting detail, totaling up hours by project for each ind'l, etc...Very tedious.	a top down report, not a bottom up (ind'l timesheet line for a resource) report. This will be accomplished by modifying the existing report to include both YTD and PYTD and by assuring that reports can show:
31	**Purchasing** Resolve problem with total amounts displayed on RTV forms	Epicor	Open Epicor support ticket #1148699PSC. Has there been any follow-up?	*Not Covered. This is a Product Issue and thus will be handled by support.*
32	**Reporting** Review best way to query for detailed information (Crystal vs. Explorer views)	Epicor AMS: Fiscal		Adequate knowledge transfer so AMS can make these determinations going forward.
33	**Royalties** Implement	Epicor		**Royalties Implementation and Documentation** Fully functional Royalties module that: • accurately calculates royalties using sales data received via imported files, and details of royalties provisions uploaded for each title and author • creates applicable journal entries in the Epicor GL for posting at month end, and • creates the necessary accounts payable files to be loaded into to AP system using Scribe Migrate for creation of the payables voucher entries, and the vendor, if not already present in the vendor database (or an alert to do so manually) for each necessary payment, thus avoiding tedious manual entry. The three items you listed above are covered by standard out of the box functionality. Posting of a Royalty Invoice (this will come through the customization) will generate a Journal Entry. When you are ready to pay the vendor then that process will create an un-posted voucher in AP. And the calculations are based on the parameters you have defined in the

Require-ment Number	Module Issue	Resp party	AMS Comments	Expected deliverable and/or outcome
				system. As for master data These are the current master data items that would need to get loaded into Royalties beyond the basic setup: Royalty Terms Vendor Part Price Info Vendor Setup Royalties Contract Royalty History Therefore Epicor, under this agreement, will provide a spreadsheet for each of these master data items. AMS will be solely responsible for getting their current data out and into these formats. Epicor will also under this agreement upload these templates into the system once. Any changes required after loading can be completed by AMS through the Royalties module. In addition, any reloading of these master files will be deemed out of scope and will be billable under a separate Statement Of Work.
34	**System Manager** Provide guidance on setting up group security with Active directory	Epicor		Group Security in Active Directory Adequate understanding of Group security for basic set up transferred to IT and Fiscal staff.

AMS Long-term Investments
Cliffs Notes

(*For details, see section D of Fiscal Reports*)



ESF = 75% annual operating expenses + unfunded medical liability (APBO)
OSF = remainder of quasi-endowment (spending on 3-yr rolling average)
Rebalanced annually, December 31
Note: Spendable income from true endowment funds held in Temp Restricted net assets and 'released' to operations as related expenses are incurred.

Values as of:	*12/31/09*	*12/31/08*
ESF	$23.1 M	$22.9 M
OSF	35.1 M	20.1 M
Unrestricted	5.4M	4.5 M
Restricted	4.0M	3.6 M

AMERICAN MATHEMATICAL SOCIETY

To: Board of Trustees **Date**: April 19, 2010
From: Constance Pass, CFO
Subject: Operating Fund Portfolio Management Report

SUMMARY RETURNS

The purpose of this memorandum is to summarize the Society's cash management policies and report on the operating portfolio's investment income performance during 2009. There are no proposals for changes in authorized investment limits or additional investment vehicles presented.

Investment earnings results by type and in total and other pertinent portfolio information for 2009 and the preceding six years are as follows:

	2009	2008	2007	2006	2005	2004	2003
Money Market Funds	1.0%	2.9%	5.0%	4.8%	2.8%	1.0%	0.9%
Vanguard Fixed Income Mutual Funds:							
Short Term Corporate Bond Fund	14.2%	(4.7%)	6.0%	5.1%	2.3%	2.2%	4.3%
GNMA Fund	5.4%	7.3%	7.1%	4.4%	3.4%	4.1%	2.6%
Long Term US Treasury Fund	(11.9%)	22.7%	9.4%	1.9%	6.8%	7.3%	2.8%
Fidelity Floating Rate Bond Fund (12/04)	28.9%	(16.5%)	2.7%	6.4%	4.2%	0.5%	
Vanguard Convertible Securities	40.8%	(29.8%	10.6%	13.0%	6.6%	7.2%	31.6%
TIPs (April 2005)	7.4%	(1.3%)	8.9%	0.9%	0.9%		
Certificates of Deposit	2.7%	4.0%	5.2%	4.7%	3.1%	2.1%	2.1%
Common Stock	23.3%	(24.4%)	(1.4%)	22.4%	0.0%	0.0%	10.7%
Annual total portfolio return	7.1%	(0.7%)	5.8%	5.2%	3.3%	2.4%	3.7%
AMS benchmark - Avg 6 month CD rate per Federal Reserve Bank	0.8%	3.1%	5.2%	5.2%	3.7%	1.7%	1.2%
AMS returns versus benchmark	6.3%	(3.8%)	0.6%	0%	(0.4%)	0.7%	2.5%
Wkly Average Operating Portfolio (in 000's)	$13,886	$15,525	$15,459	$14,578	$15,223	$13,570	$12,357
Annual Investment Income (in 000's)	$984	($105)	$895	$757	$503	$332	$453

At December 31, 2009 operating fund investments equaled $14,145,500, which is a decrease of approximately $1,862,000 from the previous year. Operations provided approximately $2,256,000 in cash in 2009. Combined with a decrease in cash of almost $900,000, a total of $5,000,000 was used to purchase property and equipment and long-term investments.

The return for 2009 was over 7% for the operating investments as a whole, despite the significant drop in interest rates on money market funds and certificates of deposit that occurred in the last eight months of the year. This 7.1% return was 6.3% over the benchmark used for the operating portfolio, the average annual 6-month CD rate per the Federal Reserve Bank, and more than made up for the losses incurred in 2008. The only investment vehicle to incur a loss in the portfolio was the Vanguard Long-Term U.S. Treasury fund, which had a stellar year in 2008 (treasuries having been considered the only safe place to be by the end of 2008). The decreasing return on the certificates of deposits and money market funds was expected for 2009, although the drop in rates was faster and deeper than originally anticipated. These low rates are expected to continue throughout 2010.

History of Authorized Investment Vehicles and Limits.

At the May 1996 ECBT meeting it was agreed that the Society should have as a goal an accumulation of current assets such that they exceed current liabilities. To help achieve this objective, at the May 1997 ECBT meeting a plan for the creation of an intermediate term investment portfolio was adopted. Increased limits of $1,000,000 (to $4,000,000) in our money market funds, $1,000,000 (to $2,000,000) in our Vanguard fixed income funds, and $500,000 (to $1,500,000) in Treasury Notes were approved. In addition, a $1,500,000 combined limit for other mutual funds, consisting of high yield and convertible bond funds, was established at this time.

In May 2000, the limits for money market funds, fixed income funds and the high yield/convertible funds were each increased by $500,000. At the May 2002 ECBT meeting, the limit on the money market fund was increased to $5,500,000, primarily to accommodate the larger investment balance carried in the operating portfolio. In May 2004, The Board of Trustees added floating rate bond funds to the authorized investments, with an investment limit of $2,000,000. In May 2005, the Board changed the limit on money market investments to be 50% of the operating portfolio balance at any point in time, again to accommodate the larger portfolio balance and liquidity needs of the Society.

The strategy of using an intermediate portfolio has occasionally resulted in greater volatility, but overall has generated an increase in the earnings of our operating fund investments. By shifting a portion of operating fund investments into slightly riskier investment vehicles we have, on average, increased the earnings compared to those that would have been achieved in low risk, short term investments. In 2009, the high returns experienced in the intermediate portfolio recovered all losses incurred in 2008 and provided just short of $1,000,000 in operating income. It is expected that 2010 returns will return to the ‘normal’ range of 3-4.5%, albeit on lower average portfolio balances due to recent significant investments in the Society’s computing infrastructure and the needs of its various facilities. Note that the average weekly balance in the portfolio dropped by over $1,600,000 from 2008 to 2009, after having increased by almost $3,200,000 over the previous six years.

Recent Portfolio Adjustments.

Finding suitable banks with higher-than-average rates of returns on certificates of deposits is increasingly difficult. Many smaller banks failed during the economic crisis of 2008-2009, and more are expected to fail as recovery is expected to be slow, particularly in the real estate market. By failure I mean either a sale of the troubled bank to another, more stable bank or outright closure, the latter event being somewhat rare during this most recent economic recession. The Society lost no earnings or principal during this time, but there are fewer banks that offer rates significantly higher than money market rates at the moment. Accordingly, the certificates of deposit portfolio has been reduced and the money market funds have been used to 'stockpile' the funds needed to support operations for the near term.

Changes in the Cash Management Environment.

The pervasive negative effect of the subprime mortgage meltdown on fixed income and equity securities – worldwide – started in earnest in the beginning of 2008 and came to a head with the failure or near-failure of major financial institutions in the US and abroad in the last quarter of that year. The US government and other governments overseas stepped in to provide much needed liquidity, but the ensuing credit crisis wreaked havoc on otherwise healthy business organizations. The precipitous declines in real estate values, due in part to their overvaluation prior to the recession as well as significant difficulties in the mortgage lending sector, will not see any fast recovery. Although some economists have declared the recession to be over, it does not yet feel that way for most of us. To date there has been no dent made in all the jobs lost and homes will continue to be foreclosed upon for many months to come. Despite the emphasis the federal government has put on keeping families in their homes by putting pressure on the mortgagees and their mortgage servicers to work out reasonable arrangements with borrowers to avoid continuing rising foreclosures, this will all take some time to work its way through the economy for a return to real growth in jobs and wages.

Fortunately, inflation abated in the last part of 2008, and was fairly low in 2009 at 2.7%. The Federal Reserve has signaled that it is not ready to start raising its interest rates; likely because the recovery seen to date is still fragile. Higher interest rates will return, but timing will be all-important. Raising rates too early may impair or reverse the recovery; waiting too long to do so might cause inflation to increase to the point of impairing or reversing the recovery.

Cash Management at the AMS.

The following rules govern AMS's management of cash:

1. ***Availability and Liquidity***. The placement of investments in the operating portfolio is coordinated with the Society's immediate and estimated future cash requirements, which are based on actual and projected revenue and disbursement streams. Cash needs to be available at the appropriate times to cover the operating expenses of the Society as they are incurred - payroll, payroll taxes and other withholdings, and vendor liabilities comprise the bulk of our cash needs. Adequate portfolio liquidity is

the ability to turn investments readily into cash without suffering undo loss of principal.

2. ***Income***. Cash in excess of immediate operating needs should be invested so as to optimize returns. The Society has intentionally accreted such excess cash, so that the ratio of current assets to current liabilities remains at least 1.5 to 1 (after removing the deferred revenue from both the numerator and denominator, and preferably 2:1) or at least 1:1 without the deferred revenue adjustment. These ratios were 2.3 and 1.3, respectively, at December 31, 2009, only slightly lower than where they were at the end of 2008 and 2007.

3. ***Preservation of principal***. Safety is of prime concern in investments of operating capital. Diversifying investment vehicles and monitoring investment maturity dates and market value fluctuations greatly reduces an investment portfolio's exposure to risk. Maximum allowable positions should and have been established for different types of investments.

Authorized Investments.

The investment vehicles authorized by the Board of Trustees for the operating portfolio are as follows:

- ***Certificates of Deposit.*** As in prior years, a large percentage of the Society's operating investment portfolio has been invested in certificates of deposit, although it has declined in 2009 for the reasons discussed above. The weekly balance in certificates of deposit averaged about 27.6% of the total portfolio during 2009 and was slightly over 28% of the portfolio in 2008.

  We generally purchase "jumbo" CD's of federally insured savings institutions and commercial banks that are assigned an acceptable safety rating by a weekly bank rating newsletter. Current investment policies limit the amount of investment in each bank issuing CDs to the Federal Insurance Deposit limit of $250,000 (exclusive of accrued interest) for Savings and Loan institutions and smaller banks and $400,000 per large commercial bank. There is no limit to the total amount of CDs that can be held by the operating investment portfolio.

Issuer	Banks & Savings and Loans
Risk of default	None - federally insured
Risk of market decline	None
Maximum Amount	$250,000 per bank or S&L, $400,000 in large cap banks, unlimited in total

  Most often we intentionally accumulate the CD portfolio (generally for one-year terms, shorter terms are used to take advantage of rising interest rates) in order to increase the yield on the portfolio, even if slightly. However, the typical CD rates are now so low and the cash flow needs of the Society have been greater in recent years because of planned investments in plant and equipment, that accumulating the money

market funds is more efficient to do, and the portfolio of CDs was reduced by almost $1,300,000 in 2009.

In the past, the Society could accumulate a portfolio between $5,000,000 and $7,000,000 with a rate differential compared to money market funds of at least 50 basis points. After about 40-60 CDs, there is no differential to be gained from the available issuing banks (we invest only in banks with a minimum 3.5 star rating out of 5 per Bauer Financial), so the additional administrative burden to the Society is not warranted.

- ***Treasury Bills.*** T-Bills are convenient to use when we have a large planned expenditure for a predetermined future date, such as contributions to the Economic Stabilization Fund; however, better rates are available on alternative forms of short-term operating investments. Treasury Bills have no market risk associated with them because they are backed by the full faith and credit of the US government, are issued for short durations and are highly liquid. Accordingly, there is no limit to the total amount of T-Bills we may hold in our portfolio.

Issuer	U.S. Government
Risk of default	None
Risk of market decline	None if held to maturity
Maximum Amount	Unlimited

- ***Cash and repos (repurchase agreements).*** The AMS uses a concentration account at Citizens Bank - Massachusetts into which all receipts are automatically deposited and from which all disbursements are made. Under a repurchase agreement, cash above an established minimum balance is "swept" on a daily basis and invested overnight in repurchase agreements. Under a repurchase agreement, the customer (AMS) purchases government securities and the bank agrees to "repurchase" them the following day. The rate earned on these depends on the dollar amount of the repo; it is generally very low in comparison to rates available on other investment vehicles. Interest rates on repurchase agreements have been extremely low for a number of years. Unless one is sweeping large amounts of cash throughout the year, the interest earned does not justify the fees charged to maintain the agreement in place. The AMS has not used this investment vehicle since 1999 and it is not expected to be used in the near future.

Issuer	Citizens Bank - Massachusetts
Risk of default	Minimal
Risk of market decline	None
Maximum Amount	$1,000,000
Comments	Collateralized by US Gov't securities

- ***Money market funds.*** The Board of Trustees has authorized a maximum investment of 50% of the balance in the operating portfolio at any point in time. At the end of 2009 the balance in money markets approximated $4,344,000, or 31% of the entire portfolio, principally in Vanguard's Money Market Prime portfolio.
  Yields on the funds averaged about 1% for the 2009, but are currently at 0.1% and will likely not increase significantly anytime soon (six month CDs average 0.3% at the end

of 2009). There is little risk to principal because the valuation of the initial investment is generally not subject to change because of its short-term duration. However, given the tenuous economic situation domestically, defaults could occur. A few money market funds 'broke the buck' during the worst of the economic crisis. The US Government offered a program to ensure the valuation of money market funds at $1 per share, and large money market managers have signed on to the program. Balances in these funds are usually maintained only at levels needed for short-term operating needs in excess of short-term maturities, or for planned investments to be made in the near future (which avoids the administrative costs of 3 month CD's or T-bills), or to take advantage of rising interest rates, since they generally under-perform alternative authorized investment vehicles.

Issuer	Vanguard and Fidelity
Risk of default	Minimal
Risk of market decline	Very Low
Maximum Amount	50% of operating portfolio balance

- ***US Treasury Notes.*** The Board of Trustees has authorized a maximum investment of $1,500,000 in US Treasury Notes. A loss of market value may be incurred on these investments in a rising interest rate environment if funds are needed before maturity and have to be sold; however this risk is slight as the Society's liquidity is deemed extremely adequate. Treasury Notes can be an attractive investment when interest rates are expected to decline and the yield curve is fairly steep. This has not been the case in recent history.

Issuer	U.S. Government
Risk of default	None
Risk of market decline	None if held to maturity, otherwise value moves inversely to interest rate changes
Maximum Amount	$1,500,000
Comments	Best used just before interest rates decline

In April 2005, $500,000 of inflation-protected Treasury notes (TIPS), which pay a stated rate of interest, plus inflation over the period outstanding (by adjusting the principal), were purchased. These investments have no risk of default and no risk of market decline if held to maturity, which is what was done. In addition to the interest payment received during the five years these were held by the Society, the redemption value received upon maturity was over $575,000 in April 2010.

- ***Fixed Income (Bond) Mutual funds.*** The Board of Trustees has authorized a maximum investment of $2,500,000 in fixed income mutual funds (initial investment, exclusive of reinvested income and share price increases, with appropriate disclosure to Treasurers and Board), and at the end of 2009 we had $3,293,000 invested. The initial investment amount is well below the limit. All of these investments are with the Vanguard Group of Valley Forge, PA. A combination of three funds is used: the High Grade Short-Term Corporate Bond portfolio, the GNMA portfolio, and the Long-Term US Treasury portfolio.

Issuer (currently used)	The Vanguard Group
Risk of default	Minimal
Risk of market decline	The longer the maturities of underlying investments, the higher the risk.
Maximum Amount	$2,500,000
Comments	Market value will decline as interest rates rise and increase as rates fall.

Historically, most of the volatility in the Society's short-term portfolio has been the result of market valuation adjustments on these investments (they are marked to market monthly); however, gains or losses technically are not realized on these funds until they are redeemed. The GNMA fund is less affected by interest rate volatility than the Long-Term US Treasury, despite similarity in term length of the underlying securities, as these debt instruments support the housing industry (and are unrelated to the problems at FNMA and FreddyMac).

Since these funds are different in nature, it is helpful to look at their characteristics separately, keeping in mind that the limit applies to the combined total.

Vanguard High Grade Short-Term Corporate Bond Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low, due to quality of underlying debt instruments and borrowers
Risk of market decline investments	Low, due to short duration of underlying
Comments	Share price is usually relatively stable; return is determined by recent interest rates, as underlying debt is short duration
2009 return	14.17%

Vanguard GNMA Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low – while not backed by the full faith and credit of the US government, It isn't likely that the US government would allow GNMA to default on its obligations
Risk of market decline	Medium, as duration is longer
Comments	Since the GNMA obligations are linked to collateralized mortgage obligations, and mortgage rates tend to change more slowly than other long term rates, this fund is a bit less volatile when interest rates change.
2009 return	5.39%

Vanguard Long-Term US Treasury Fund:

Issuer (currently used)	The Vanguard Group
Risk of default	Low, as most underlying securities are US government direct issues
Risk of market decline	Highly sensitive to interest rate changes, as duration of underlying securities is long-term
Comments	This fund has caused most of the volatility in the Intermediate portfolio; staff mitigates some risk by adjusting investment amount
2009 return	(11.94%)

- ***High Yield and Convertible Bond Mutual funds.*** The Board of Trustees has authorized a maximum investment of $2,000,000 in any combination of high yield bond and convertible securities accounts. At December 31, 2009 we had $1,089,000 invested in these vehicles, in one convertible securities mutual fund managed by the Vanguard Group. Gains or losses technically are not realized on these funds until they are redeemed, although, for financial statement purposes, the Society records these investments at market. It is not anticipated that further investments in this group of investment vehicles will be made in the near future.

Issuer (currently used)	The Vanguard Group
Risk of default	Medium to High
Risk of market decline	Sensitive to movements in the equity markets
Maximum Amount	$2,000,000
Comments	Total returns often parallel those of equity markets
2009 Return	40.81%

- ***Floating Rate Income funds.*** The Board of Trustees has authorized a maximum investment of $2,000,000 in Floating Rate funds. $1,000,000 was invested in the Fidelity Floating Rate High Income Fund in December 2004. The return for 2009 was 28.86%. Gains or losses technically are not realized on these funds until they are redeemed, although, for financial statement purposes, the Society records these investments at market.

Issuer	Fidelity
Risk of default	Low
Risk of market decline significantly	Low, possibly medium if economy falters
Maximum Amount	$2,000,000
Comments	The fund is expected to have a relatively stable NAV with yield providing most of the return
2009 Return	28.86%

Summary of Operating Portfolio Investments, December 31, 2009.

Description	Value at 12/31/09	Current Board Limit	Excess over Limit
Money Market Funds	$4,344,328	50% of total portfolio	NA
Certificates of Deposit	3,318,000	$100,000 per inst.	NA
Treasury Notes		1,500,000	NA
Vanguard Bond Funds:			
GNMA Fund	1,430,588		
Short-Term Corp Bond Fund	1,355,193		
LT US Treasury Fund	599,089		
Subtotal	3,384,840	2,500,000 (1)	NA
High Yield and Convertible Funds:			
Vanguard Convertible	1,284,408		
Subtotal		2,000,000	NA
Floating Rate Funds:			
Fidelity Floating Rate High Inc	1,230,348		
Subtotal	1,230,348	2,000,000	NA
			NA
$500,000 Face TIPs	572,452		NA
Common Stock	11,124	Unrestricted gifts	
Total	$14,145,500		

(1) Limit is exclusive of reinvested dividends and share price increases. See discussion above.

To:	Board of Trustees
From	Constance Pass, CFO
Subject:	Financial Software Implementation Status
Date:	April 27, 2010

Summary: We went live with the Epicor Financial Suite in January 2009, and successfully closed the books on 2009 and edited the 2010 final budget only a few weeks behind the normal timing under the previous accounting package. By the end of 2009, the following modules were being routinely used and (almost) operating as expected and desired:

Epicor Enterprise General Ledger, Purchasing, Accounts Payable and Accounts Receivable modules
Star Projects and Star Web TimeRecorder
Advanced Allocations
FRx – Report Package

An amended implementation agreement was executed with Epicor Consulting in January 2010, and since that time the assigned Consultant has worked sporadically to address areas of STAR that were not functional (never were configured for AMS use), the redeployment of the entire financial software system in an Active Directory environment and the 'virtualization' of the system. Additionally, some of the items on the 'punch-list' that was an integral component of the revised agreement have been worked on.

To date, Epicor Consulting is well behind its original estimated completion dates and a revised schedule is being requested along with a commitment of Epicor staff for specific days and weeks.

Completion of the implementation of the remaining modules, Active Directory (and related training), the Royalties module and the Doc-Link document storage and integration software, is unknown at this time.

Background Information:

In late December 2007, the Society purchased new financial software to replace the Ross accounting system and various in-house developed systems. The software was purchased from Epicor, and includes the following modules:

> Epicor Financial Suite, which includes the General Ledger, Accounts Payable, Accounts Receivable (for miscellaneous receivables handled within the Fiscal Dept.), Purchasing, Cash Management and Reporting modules. Software for the budgeting process for the Society, Advanced Planner (a Sage Software product) was purchased to gain efficiencies in the budget process, and Advanced Allocations (a Sage Software product) was also purchased to replace the in-house developed 'FISCA' system. The in-house developed time recording system (for allocation of hours worked to projects) and the use of paper time recording systems was replaced with the STAR Projects and STAR Web Time Recorder system. This system has the capability to not only accumulate time worked on Society projects, but accumulate costs of subprojects outside the General Ledger. It can also be used to manage projects. A Royalties module was also purchased, as well as Doc-Link, a system for storing electronic documents and linking them to transactions, so we can reduce the amount of paper storage and management.

The original plan was to commence the implementation in February 2008 with a completion date (go-live) of July 1, 2008. The initial meetings with the Epicor Project Manager took place in late March, early April, with implementation work beginning in earnest in mid April. The go-live date was pushed off until August and then September. From April until the end of August, there were many times when work by AMS staff and Epicor staff had to be redone – sometimes as many as three times. The vast majority of these problems resulted from the Epicor Project Manager's lack of knowledge about the requirements of the STAR and Advanced Allocations software, such that decisions made previously and the work resulting from those decisions had to be reworked.

By mid-August AMS staff began conversations with the executive in charge of the implementation, John Farrell, about the problems with the implementation. Despite his constant reassurances regarding the cost (which was clearly running over the budgeted amount) and the Project Manager's capabilities, as well as allegedly freeing up the schedule so that resources would be more available to us, progress pretty much came to a halt in early December with the Purchasing system functioning and the General Ledger and Accounts Payable modules minimally functioning. We were unable to test allocations in November as planned, as the knowledgeable STAR and Advanced Allocations resources from Epicor were not available to assist. We moved ahead with our drop-dead date of January 1st, and began use of the basic functionality of the Epicor Financial module for our accounting records.

In early March a letter was sent from the Executive Director to the John Farrell, which summarized our position regarding the implementation and our expectations for moving forward. Mr. Farrell visited later that month, and a new Project Manager was assigned to complete the engagement.

Update since May, 2009:

Work by Epicor Consulting on our implementation continued to be sporadic and it was not possible to get Mr. Farrell to agree in writing to any specific implementation cost. We did get Epicor to configure Advanced Allocations, which were used for the first time for the April closing. By mid October 2009, the closing of all previous months had been done, with the closing of September about on the schedule used with the Ross system. Fiscal has adjusted many processes and procedures to accommodate the way the new system works, which are being documented. However, maintaining adequate internal accounting controls was a challenge and continues to be so, as every member of the department is deeply involved in the diaily accounting tasks and procedures necessary to maintain the books and records of the Society.

Mr. Farrell left Epicor in June 2009 (we discovered this via contact from an outside consultant – not from Epicor) and quite some time elapsed before we could determine exactly who we should contact to get the implementation and cost negotiations back on some sort of reasonable track.

Once these negotiations began again, it became apparent the AMS and Epicor had significantly different views about the nature and causes of the problems with the implementation experienced to date. All work on our ongoing problems ceased in late August 2009, and negotiations as to final costs, the work that was required to be done and goals accomplished for those costs were not resolved until late December 2009. It then took an additional month for Epicor to prepare documents conforming to the terms agreed upon in the settlement letter of December 2009.

Work on the implementation since January 2010 has been sporadic, and it is likely that Epicor intends it to remain so – giving us resources as they free up from 'current' implementations. Assignment of

qualified staff and commitment to dates and timetables that meet AMS needs remains an issue, as it has been since August 2008.

We are making progress, but it is difficult to estimate when everything will be done since it seems that new client needs will interfere with ours.

We had to use the in-house developed royalty module for author royalties for 2009, and any implementation of Active Planner will be too late for use in preparation of the 2011 detailed budget this summer.

Report on Association Management Software Implementation

Summary

In January 2009, the Board of Trustees approved the capital request for the purchase and implementation of the Personify association management software from TMA Resources (TMAR). Since then, AMS staff has been working with TMAR on the implementation process. TMAR follows a well-documented implementation process that includes the following tasks:

1. analysis of the Society's needs
2. configuration of the Personify software
3. identification of possible modifications
4. analysis of modifications
5. design and development of modifications
6. data conversion
7. system testing
8. user training
9. production support

The first four tasks are referred to as the Discovery stage. Each of these tasks requires communication between the Society and TMAR and need to be well documented. TMAR has setup a SharePoint website that is used for the sharing and exchange of documents with the AMS.

Tasks 1 through 3, as described above, have been completed. The first draft of the Gap Analysis documents created as a part of task 4 have been delivered to the AMS and returned with questions and comments. TMAR expects to have addressed the initial questions and comments by the end of April and will deliver estimates for the cost of programming to modify Personify to meet our needs. When the cost estimates have been delivered, our staff will prioritize the modifications, determine which will be done by TMAR, which will be done by AMS staff, and which will be accomplished by another means. Once this has been completed, a schedule can be created for the remainder of the implementation. At this time the earliest implementation will be completed is expected to be early in 2011.

The Personify software has been installed on the new, virtual server environment approved by the BT this spring. This virtual environment is expected to provide a stable, efficient environment for this software and a number of other systems. Personify software has a direct interface to the new Epicor accounting system that will allow for sharing of information between Personify and Epicor.

Project Report

TMAR's implementation process recommends that the AMS create a Core Implementation Team. The Core Implementation Team includes key decision makers from each of the major functional areas for the system to be installed. It includes representatives from Information Systems and Finance. It is recommended that the team include people who can make decisions on how things will be done using the new system and who can understand how internal procedures can be changed to accomplish a task, rather than just recreating an old workflow in the new system. The core implementation team includes:

Tom Blythe
Diane Boumenot
Gary Brownell
Janice Clark
Christine Davis
Tom Freitas
Ellen Heiser
Carol Hill
Beth Huber
Stephen Hultquist
Gerry Loon
Cheryl Marino
Ellen Maycock
Donald McClure
Lori Melucci
Joanne O'Meara
Bill Olson
Connie Pass
Penny Pina
Donna Salter
Lori Sprague
Peter Sykes
Barbara Veznaian

TMAR's project team consists of the Director of Professional Services, a project manager, a business specialist, and a technical specialist. These four people are permanently assigned to the AMS implementation project and will call upon other resources within TMAR as necessary.

TMAR's implementation methodology consist of four stages:

1. Discovery
2. Design and Development
3. Configuration, Conversion & Testing
4. Roll Out

Each of the stages is described below.

Discovery

The discovery stage contains all of the analysis efforts of the project. The primary activity of this stage is for the TMA Resources Business Consultant to meet with the client's Core Implementation Team to collect the business requirements for the project. Any gap that is identified between the base functionality of Personify and the client's business requirements is captured as a "Fit Item".

The deliverables from the Discovery Stage include a Configuration Workbook, Prototype Personify Setups, Implementation Services Workbook, Implementation Statement of Work, and Implementation Project Plan. The Implementation Services workbook is made up of four reports: a Fit Analysis Report, eBusiness Integration Analysis Report, Reports Analysis Report, and Data Conversion Analysis Report. After completion of the Discovery Stage, a refined project schedule will be developed.

Design & Development

During this stage, any approved enhancements to Personify or the eBusiness software will be written. This is also when custom reports development takes place. Development may be done by AMS staff or by TMAR. Any enhancements developed by TMAR will be subject to "In Process Reviews", where AMS staff is presented with progress towards enhancements to the system and are given the opportunity to provide feedback on the development. Deliverables from the Design and Development Stage include Detail Design Documents for each approved "Fit Item", "In Process Reviews", and the custom components ready for testing.

Configuration, Conversion & Testing

During this stage, TMAR will work with the AMS to complete the Personify system setups, convert data from the Society's existing systems to the Personify database, and test the completed application prior to the system being used in production. Although a conversion analysis has already taken place during the Discovery Stage, this stage is when detailed data conversion mapping will take place. A Technical Consultant will work with the AMS to assist us in mapping our data to the Personify conversion templates. Once the mapping is completed, the first of the conversion cycles is initiated. Other milestones during this stage include Personify User Acceptance Testing and training on Baseline Financial Reconciliation. Deliverables for this Stage include completed data conversion cycle(s) with accompanying conversion reports, Baseline Reconciliation Workbook, and a System Testing Checklist.

Roll Out

The Roll Out stage consists of three main components: end user training, final conversion, and go live support. TMAR will work closely with the AMS to create a training plan to meet our needs, taking into consideration timing, staff size, number of modules being implemented, and method of delivery. Go live support, both on-site as well as phone support, will be scheduled and performed to successfully support our needs.

Tom Blythe, Chief Information Officer
Information Services Division
April 23, 2010

Report on Information Architecture Project for the AMS Website

The new website was successfully launched on April 6, 2010. New features of the site include:

- **Revised navigation –** The redesigned navigation allows users to easily move around the website and quickly find news and information about AMS programs and services that are important to them.
- **Breadcrumb navigation –** On any page visited, the user can see where they are within the website's areas and hierarchy.
- **"Persona" Pages –** Personas provide another way for users to see content focused on their professional needs.
- **News, Calendar, and Quick Links –** Context-sensitive information is displayed throughout the site. The site also provides users with a searchable News database.
- **New Page Layout –** The clear, concise page layout presents all facets of the content for easy access.
- **Frequently Asked Questions -** There is a searchable FAQ database.
- **Social Network Options –** Users can post content from the AMS website to their Facebook wall or to scores of other social networking sites.
- **Popular links** – Popular pages are just a click away. The links across the top of every page take users to the most frequently visited AMS resources.
- **Translations** – Google Translate provides a way for users to translate content into many different languages, making the AMS website a truly global portal.

Most of the feedback received since the launch has been very positive. As feedback is received, it is analyzed and prioritized. Some feedback has resulted in immediate changes to the website, while other feedback will be held for future consideration.

Improvements scheduled for the site this year include:

- **Social Networking Services –**The AMS website will be complimented with various social networking services.
- **Google search –** The various advanced searching solutions now offered by Google will be researched with the intention of improving the search experience for visitors to the AMS website.
- **Redesign AMS Sub-websites** – Page layouts of several AMS sub-websites will be redesigned utilizing the same framework methodology as the main site. Sub-sites include: Feature Column, Math in the Media, Math Digest, CML, Mathematical Moments, Who Wants to be a Mathematician, Early Career Profiles, and Fiske Planned Giving.
- **MR Tools Integration** – Working with the Ann Arbor office, several Mathematical Reviews-related web services will be integrated with the rest of the site by redesigning the user interfaces, including: MR Electronic Submissions, MR-Lookup, and MRef.

Gerry Loon, Director
Business and Publication Computing
April 23, 2010

THE NEW ZEALAND MATHEMATICAL SOCIETY (INC.)

Institute of Fundamental Sciences
Massey University
Private Bag 11222
Palmerston North, New Zealand.
r.mclachlan@massey.ac.nz

August 17, 2009

Professor George E. Andrews
President, AMS

Dear Professor Andrews,

I am writing to you on behalf of the Council of the New Zealand Mathematical Society.

Since 1987 the LMS has been sending a lecturer to New Zealand, normally every 2 years. This 'Forder Lectureship' has been a tremendous success. All the Lecturers have been of outstanding quality and both their research seminars and their public lectures have been well received.

Professor Christopher Zeeman	1987
Professor Sir Michael Atiyah	1989
Professor Peter Whittle	1991
Professor Roger Penrose	1993
Professor Elmer Rees	1995
Professor Ian Stewart	1997
Professor Sir Michael Berry	1999
Dr Tom Körner	2001
Professor Caroline Series	2003
Professor Martin Bridson	2005
Professor Peter Cameron	2008

The Forder Lecturers usually give a research and a popular lecture at each of our 7 main university campuses, spending 2 or 3 days at each campus and getting to know the New Zealand mathematicians. They have all enjoyed the Lectureship and I have always felt that mathematics in both NZ and the UK has benefited from the scheme.

We would like to propose that the AMS and the NZMS jointly set up a related scheme: a bilateral exchange of lecturers, with a US-based mathematician touring NZ and a NZ-based mathematician touring (a small part of) the US in alternate years.

In recent decades the mathematical ties between NZ and the US have increased markedly. Many NZ mathematicians have studied and worked in the US and maintain active ties there. Increased

research funding has greatly increased the number of visitors and the number of specialized conferences. However, these activities do not tend to allow the time for visitors to undertake the kind of touring we envisage here; research grants are often very specific and do not allow for visits where no prior research links exist. In addition, research funding tends to fluctuate: funding for our premier mathematical research institute, the NZIMA, has been terminated and it is not yet clear when we will be able to reapply. Hence we see a role for professional bodies like the AMS and the NZMS to fill this gap.

The population of New Zealand is small (4.2m) but we are proud of our standing in the mathematical sciences. Our most recent research assessment exercise rated mathematics as the strongest science in New Zealand, and the impact factor of our research is above the world average. The annual summer workshops of the New Zealand Mathematics Research Institute, initiated in 1985 by New Zealand Fields Medallist Vaughan Jones, attract world-class talent (Martin Bridson, Michel Broué, Persi Diaconis, Roger Howe, Gus Lehrer, and Marcus du Sautoy in 2010). The New Zealand Institute of Mathematics and its Applications has run 17 six-month thematic research programmes. In 2007, the 1st joint meeting of the AMS and the NZMS, in Wellington, New Zealand, was a great success, attracting delegates from 30 countries including 73 from the US.

The exact funding arrangements would remain to be determined, but one simple way in which they could work would be as follows. The NZMS would pay for an economy class air ticket to NZ and local travel within NZ for the US-based lecturer. (If the lecturer had external financial support for their own travel, the air ticket could be used by their spouse if necessary.) Local expenses would be covered by each host department. In return, the AMS and the US host departments would pay for the expenses of the NZ-based Lecturer to tour 6–8 universities in the US.

I would point out that the annual income of the NZMS is around US$14,000, so the proposal represents a significant financial commitment by the NZMS. Nevertheless, the Council of the NZMS believes that investing in the proposed scheme would be a valuable way of promoting and enhancing the country's mathematical activity.

Yours sincerely,

Prof. Robert I. McLachlan,

President,
New Zealand Mathematical Society

AMS/NZMS Visiting Lectureships

The object is to found a bilateral exchange of lecturers, with a US-based mathematician touring NZ and a NZ-based mathematician touring (a small part of) the US in alternate years.

It is proposed that this program be initially agreed to for 6 years, allowing three AMS lecturers to go to New Zealand, and three NZMS lecturers to travel in the US.

The AMS would have a selection committee consisting of the President, the Secretary, and the Chair of the National Program Committee. The NZMS would determine the size and nature of their selection committee.

Each committee would be in charge of recruiting and selecting potential lecturers, subject to consultation with the sister committee. Then the committees would negotiate the specifics of the tour of each lecturer.

It would be expected that the NXMS would pay for an economy class air ticket to NZ and local travel within NZ for the US-based lecturer. (If the lecturer had external financial support for his/her own travel, the air ticket could be used by his/her spouse.) Local expenses would be covered by each host department. In return, the AMS and the US host departments would pay for the expenses of the NZ-based lecturer to tour 3-6 universities in the US. In particular, the AMS would pledge covering travel between universities in the US, and would ask host universities to pay local expenses. Also, serious consideration would be given to inviting the visiting lecturer to present an address at a regional AMS meeting, assuming this could fit within the agreed upon itinerary.

Advancing Ways of Awarding Recognition in Disciplinary Societies (AWARDS)

Introduction

In its 2006 report *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering*, the National Academies urged scientific and disciplinary societies to ensure that women be recognized for their contributions to the nation's scientific and engineering enterprise through nominations for awards and leadership positions. In response to this recommendation, the Association for Women in Science (AWIS) and the Recognition of the Achievements of Women in Science, Medicine and Engineering (RAISE) Project (part of the Society for Women's Health Research, SWHR) began a joint initiative two years ago to develop a mechanism to address the under-representation of women among scientific award recipients.

Based at AWIS, AWARDS (**Advancing Ways of Awarding Recognition in Disciplinary Societies**) will partner with seven disciplinary societies **to develop processes customized for each organization to foster the diversity of their scientific award recipients (Goal 1).** Towards this goal, over the next three years, AWARDS will work collaboratively with the American Chemical Society (ACS), the American Geophysical Union (AGU), the American Mathematical Society (AMS), the American Statistical Association (ASA), the Mathematics Association of America (MAA), the Society for Neuroscience (SfN), and the Society of Industrial and Applied Mathematics (SIAM); to:

1) Analyze data on their existing awards, nominations, awardees, and award processes;
2) Identify components of Societies' culture and award nomination and selection processes that influence who is nominated and subsequently selected for awards;
3) Provide information on research-based best practices to increase gender equity in awards, tailored to the characteristics of each AWARDS partner Society;
4) Assist AWARDS partner Societies in selecting and implementing changes to their organization and its awards practices, and evaluating the consequences of those changes; and
5) Develop maintenance practices for long-term and sustainable support of awards equity in AWARDS partner Societies.

Through AWARDS, the Societies will reduce the impact of implicit bias; develop transparent, evidence-based practices; and reconfigure nominations and selection practices. The partner Societies have a combined membership of 329,000, and sponsor nearly 400 awards.

AWARDS will build on resources and input from the STEM (science, technology, engineering, and mathematics) community, ADVANCE programs, and social science research to reduce the impact of implicit bias and foster organizational change. **Lessons learned from this project will be used to develop a framework for future use with other disciplinary societies with distinctive cultures and structures (Goal 2).** The Association for Women in Mathematics (AWM) will collaborate with AWARDS to support and catalyze expansion of award equity efforts to additional mathematics societies.

The AWARDS Executive Committee is responsible for directing the project and accomplishing the project's goals. It includes PI Elizabeth Kean (AWIS Awards and Equity Committee Chair); Co-PI Janet Bandows Koster (AWIS Executive Director); Co-PI Stephanie Pincus (Founding Director of the RAISE Project); Co-PI Anne Lincoln (a sociologist with expertise in organizational culture and women in academic science); and a Project Manager with expertise in organizational change. Each member has specific responsibilities congruent with her expertise (details, pg 12). The Project Manager is also responsible for coordinating activities and communications among PIs and participating Disciplinary Societies. Janet Malley will serve as our external evaluator to assure that activities result in the desired changes.

Since the project was first proposed in the 2008 PAID competition, plans have evolved. The panel summary noted that "it was an innovative proposal that has tremendous impact for gender equity in the sciences," and that "the project has great potential for changing institutional practices, policies and procedures related to rewards (prizes and awards)." This current proposal now has: scaled back the number of participating Disciplinary Societies; obtained letters of commitment from each; clarified the role of the RAISE Project; and provided more details of activities. With these changes, AWARDS intends to increase the recognition of STEM women's accomplishments and advance their career trajectories.

Statement of the Problem

Awards and prizes play a critical role in shaping and advancing STEM careers (Frey 2007; English 2005). Under-representation of women among STEM award recipients presents a barrier to their advancement in these fields. While the proportion of Ph.D. degrees earned by women in STEM fields has increased substantially over the past 25 years (National Science Foundation 2006; England *et al.* 2007), the increase in the number of women receiving awards from scientific societies has not kept pace (Figure 1, The RAISE Project; see Pg 6 for a description of the RAISE database). The age distribution of women in the STEM professions combined with awards targeted at different career stages complicates a full understanding of women's representation. Nonetheless, it is clear that under-representation of women among awardees cannot be explained away by a "cohort effect," since the percentage of women receiving awards remains below their proportional representation in the field even 20-25 years ago. A developing body of evidence suggests that the under-representation of women in awards has its roots in social factors related to award nomination, selection, and evaluation practices.

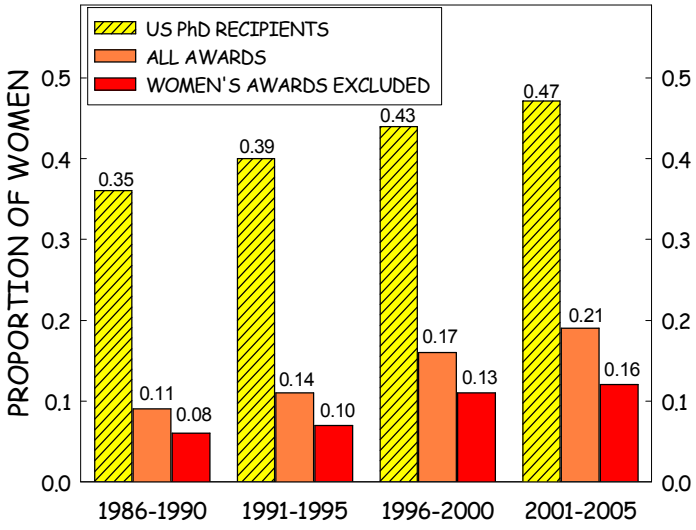


Fig. 1 Science Awards by Gender (1985-2004) Women receive a disproportionately small share of science awards compared to science PhDs.

From 1981-2007, women received approximately 12% of all scientific awards for which both men and women were eligible (The RAISE Project). For over half (54%) of these 1066 awards, women were the recipients less than 10% of the time.

Over the past 25 years, the number of awards specifically for women has increased (The RAISE Project). From 1981 to 2006, the number of women-only awards in the RAISE database rose from 5 to 71. This has increased the overall number of female award recipients in all STEM disciplines to almost 25% in 2006. While often intended to highlight women's research and compensate for biases in the nomination and selection processes, women-only awards have the potential to ghettoize and devalue women's scientific contributions, the precise results these awards are intended to ameliorate (Williams 2006).

To estimate the extent of women's under-representation in awards, RAISE has devised the ***RAISE Score***. The RAISE Score is defined as the percentage of women award winners divided by the percentage of women with terminal degrees in the field as reported by the NSF or equivalent; a RAISE Score of 1

would indicate award gender equity. RAISE Scores are calculated both including and excluding awards restricted to women in order to evaluate the influence of gender-restricted awards.

The utility of the RAISE Score in estimating under-representation of women in awards is illustrated by data from some of our partner Societies. The Society for Neuroscience (SfN) has a RAISE Score of 0.73 which drops to 0.41 when awards restricted to women or for the advancement of women are removed. The American Geophysical Union has a single RAISE Score of 0.25 since there are no awards exclusively for women. Mathematics, considered as a unit because of the small number of awards in some societies, has a RAISE Score of 0.73 which drops to 0.43 when gender-specific awards are removed. Thus, each of these partners has clear evidence of a disparity in awards, with women receiving only 25% to 43% of those predicted based on the number of women in the field.

Strategies for Addressing Women's Under-Representation in Awards

For the diversity of the scientific community to be fully reflected in awards recipients, multiple strategies must be implemented: sharing information about award opportunities, assisting in preparing nomination packets for women, reducing bias, and increasing transparency of award nomination and selection processes. Many of the factors that lead to under-representation of women in STEM awards also affect racial and ethnic minorities, and their concerns will be an inherent part of AWARDS efforts.

Improving nomination and selection processes: Social science research on workplace diversity suggests a sequence of strategies for diversifying the recipients of STEM awards. Broadening nominee recruitment networks is an important first step to diversifying the pool of award nominees. Informal applicant recruitment procedures lead to small, homogeneous applicant pools because people tend to associate with others similar to themselves and, consequently, information flows through networks that are relatively homogeneous, particularly in terms of race, gender, and social class (McPherson *et al*. 2001). This homogeneity is particularly evident in job-search and hiring processes (Granovetter 1973, 1974; Steinpreis *et al.* 1999; Trix *et al.* 2003), entrepreneurship opportunities (Aldrich 2005), and organizational board membership (Scott *et al*. 2007). In contrast, formalizing recruitment methods through advertising not only increases the size of applicant pools, but also increases the gender and racial diversity of the pools (Drentea 1998; Goldin and Rouse 2000). However, because women tend to undervalue their own accomplishments compared to equally capable men (Correll 2001; Fiorentine 1987), societies must implement special outreach to potential women award applicants and/or their nominators.

Making review processes gender-blind is a crucial second step to increasing impartiality. Research finds that when men and women of the same abilities and characteristics are compared, men are typically evaluated more favorably than women by both men and women (Wennaras and Wold 2007; Correll *et al.* 2007; Foschi 2000; Steinpreis *et al*. 1999; Valian 1998).

Several case studies illustrate the impact of gender-blind evaluation on women's opportunities. In a study of major symphony orchestra audition practices, Goldin and Rouse (2000) found that gender-blind auditions increased by 50% the likelihood that a woman would advance in the preliminary rounds. Ultimately, use of a blind screening process increased women's likelihood of winning an orchestra position by 25%. Similarly, the manuscript acceptance rates of articles first-authored by women jumped by 7.9% after the journal *Behavioral Ecology* switched from a single-blind manuscript review process, in which reviewers know the names of manuscript authors, to a double-blind review process in 2001 (Budden *et al.* 2008).

Formalized recruitment and gender-blind practices improve impartiality, but there are additional methods of diversifying applicant pools and award winners. For example, in 2004 the first round of the National Institutes of Health's Pioneer Awards all went to well-established male researchers, not the pool of newer

talent to whom the award was targeted. An analysis concluded that a number of conditions had activated gender bias in the selection process (Carnes *et al.* 2005):

1) Time pressure placed on evaluators makes it more likely for them to rely on stereotype assumptions that favor men as scientists;

2) Absence of face-to-face discussion of candidates disadvantages women;

3) Ambiguity of performance criteria combined with the word "leadership" favors men;

4) Higher weight given to letters of recommendation negatively affects women (letters written for women tend to be shorter, have more references to personal life, include more gendered terms, contain fewer standout adjectives, and have more gender-stereotypic adjectives -- mostly because of implicit bias on the part of the recommenders);

5) Requiring each finalist to make a formal presentation, where the nominee and not the nominee's work is the focus of the evaluation, favors men (male scientists are more likely to meet the implicit assumption of what a scientist, pioneer, and leader should look like).

Starting in 2005, the Pioneer Awards nominations and selection processes were changed to include: 1) removing "leadership potential" from criteria; 2) engaging in outreach to women, minorities, and early career scientists to encourage inclusion and welcome them to apply; 3) recruiting a balanced pool of reviewers; 4) orienting reviewers to read the nomination announcement and asking them to consider "innovation density" to level the playing field for younger applicants; and 5) changing nominations to self-nomination only. Even though a gender-blind review process was not used, these changes still had a dramatic impact. The 2005 awardees were 46% female and in the subsequent three years women received 25 to 33% of Pioneer awards (NIH website, http://nihroadmap.nih.gov/pioneer). In addition, the awardee pool has become more racially and ethnically diverse.

Changing the search and hiring processes used by academic departments has also increased the diversity of candidate pools and resulted in more diverse hires. The Women in Science and Engineering Leadership Institute (WISELI) at the University of Wisconsin-Madison, an NSF-ADVANCE-IT awardee, developed workshops to introduce search committee chairs and members to the effects of unconscious (implicit) biases and assumptions in evaluation of candidates. By sharing information about running efficient and effective searches, recruiting excellent and diverse applicants, and conducting fair and thorough reviews of candidates, "Searching for Excellence and Diversity" workshops have increased candidate satisfaction with search procedures, and the number of new women and minority faculty in participating departments. The workshops involve active learning and peer education, as well as adult learning strategies that have been successful in workshops for science search committees and departments (How People Learn 1999). This example points a way that other institutions, including disciplinary societies, could reduce the impact of implicit biases that prevent equity in recognizing the accomplishments of women and minority professionals.

Two of the Co-PIs have examined some of these issues in the context of scientific awards and prizes. In one study, the relationship between the gender composition of award committees and award recipients was tested (Lincoln, Pincus, and Schick *n.d.*). Using data from the American Physical Society (APS), the largest organization of physicists in the country, APS award recipients since 1997 (n=475) were analyzed; the proportion of women on award selection committees had a statistically significant positive relationship to women's receipt of awards. However, the strongest predictive factor was the sex of the committee chair: a woman chair nearly triples the likelihood that a woman will receive the award. These findings demonstrated that conclusions from other research, e.g., the NIH Pioneer Awards, can translate across disciplinary societies and suggest that diversifying award committee chairs and members would lead to greater diversity among award winners.

In a second study, the RAISE Project has examined the title of awards and prizes. Excluding awards restricted to women (which are often named after a woman), women were twice as likely to win an award if the award title is gender neutral (20%) than if the award title includes the full name of a man (10%). By implication, effort should be made to assure that women are considered for awards named after men (Schick and Pincus, in preparation).

Stimulating organizational change: Institutional inertia is largely a product of the internal forces in an organization, e.g., sunk costs, vested interests, ideologies, and the entrenched behaviors of participants. Through the process of time-stamping, organizational practices that arise at the same historical point in time tend to share many features because they confront similar social, political, and cultural circumstances. Provided that the practices have no adverse effects that threaten the survival of an organization, procedures tend to remain in place until otherwise challenged (Scott and Davis 2007). When new organizations arise, they typically emulate many policies and practices of related established organizations. Consequently, unless challenged, gender discriminatory practices in both long-established and newer scientific disciplinary societies remain indefinitely as vestiges of the environment at the founding of the original organizations.

The sources of change – political, social, and cultural – often arise outside of an organization. For example, challenges to existing practices can come from exogenous coercive or normative pressures from the legal system, cultural expectations, organizational stakeholders, professional organizations, or other organizations on which the changing organization is dependent. Moreover, transforming practices in a small number of organizations can influence those in others. Once some great symphony orchestras changed their recruitment and hiring practices, others followed suit (Goldin and Rouse 2000). Similarly, Lincoln (*n.d.*) found that state bars in less prestigious states historically responded to normative pressures exerted on each other – a sort of peer pressure – in response to professional concerns that their bar exam standards were too low.

Consequently, AWARDS has positioned itself as an external agent that can support understanding of historical bias in the partner Disciplinary Societies. Transformations of award practices by these Societies will provide models for others to follow.

Influencing organizational culture: Systemic change is needed to fully address inequities, as noted in the following models of diversity initiatives. Three key components for such an initiative in the University of California system were: 1) a framework for monitoring progress; 2) a commitment to analyze and use data for organizational change; and 3) a commitment to take corrective action (Smith *et al*. 2006). A case study of the University of Michigan ADVANCE Project illustrated the critical role of "organizational catalysts" in institutional transformations to decrease bias of all forms in its processes (Sturm 2007).

Beyond Bias and Barriers (2006) also identified common factors for successful diversity management programs in a number of organizations. These benchmarks of success, adapted for disciplinary societies, are: 1) commitment and involvement of leadership; 2) activities tailored to organizational needs; 3) activities that are not specific to any one demographic group; 4) activities that will change individual behavior; 5) changes to existing organizational procedures and practices; 6) involvement of representatives in educational efforts and program planning across the organization; and 7) incorporation of measures and accountability. Similar recommendations were made by a group of scientists who argued for a cultural shift in science values to increase the diversity of participants and the types of research questions that were to be studied (Uriarte *et al.* 2007).

AWARDS incorporates the above studies and reports. It is designed to work with partner Disciplinary Societies and lead to evidence-based planning and actions that can transform the culture of those

Societies. AWIS and the RAISE Project share the long-term goal of creating a scientific culture that values the broad range of contributions needed in the 21st century and eliminates disparities between men and women and between majority scientists and those of color.

AWIS and RAISE Resources that Enable AWARDS

For over three decades, AWIS has supported and represented women in the STEM community by breaking down barriers and creating opportunities to ensure that women in these fields can achieve their full potential. As the only all-inclusive multidisciplinary organization supporting women in STEM, AWIS has a broad membership base and connections with women's organizations. Its database of 86 women's committees, organizations, and caucuses in STEM fields enables it to communicate regularly with the leadership of those groups, generating activities on issues such as inequities in awards and the nomination of women for presidential appointments in changing federal administrations. These conduits facilitate interactions with a range of disciplinary societies and provide a network to sustain on-going AWARDS activities, including those that are conducted at a distance and with few face-to-face meetings. AWIS is a non-profit membership organization with 3000 members and 50 chapters throughout the United States. Located in Washington, D.C., AWIS headquarters are in close proximity to those of many other STEM disciplinary societies. AWIS has a robust infrastructure to manage the grant, and multiple resources, e.g., a semi-monthly newsletter and an active Awards and Equity Committee, to support AWARDS' activities.

The RAISE Project, started in 2005 with funding from the Alfred P. Sloan Foundation, is housed in the Society of Women's Health Research in Washington, D.C. It has constructed a national awards clearinghouse that includes a web-based data bank of awards in STEM, medicine and social science. Its website (www.raiseproject.org) provides information, analysis and guidance about awards. Awards are categorized by discipline, career level, and gender restrictions, and are linked to specific disciplinary society award sites to facilitate rapid acquisition of full information. Over 22,000 award winners are displayed for a total of 1161 awards; awardees are linked to Research Crossroads so that information can be obtained about the expertise and background of specific award winners. In addition to providing guidance to potential awardees in seeking recognition, the site includes an on-going survey designed to elucidate women's perceptions of awards and gender-based barriers to winning them.

In the summer of 2007, AWIS and RAISE began "Creating a Culture of Celebration and Recognition" (CCCR), a series of teleconferences with leaders from STEM women's committees, caucuses, and organizations to 1) coordinate efforts with other organizations supporting women in STEM; 2) inform the STEM community of resources and opportunities to recognize women's accomplishments, and 3) share information on efforts in specific societies to increase the diversity and quality of nominations and decrease gender bias in the award selection process.

Two initial CCCR conversations in 2007 in which representatives of a total of 27 STEM women's group leaders participated were the basis for initial AWARDS plans. Two subsequent CCCR teleconferences continued to gather information on specific award equity practices, and to inform societies about the AWARDS effort. Input was also solicited from leaders of STEM societies about the costs and benefits of participating in an award gender equity project. Those conversations led to selection of our current Disciplinary Society Partners and to inclusion of the Association for Women in Mathematics (AWM) which will participate in change and dissemination activities of AWARDS (see Page 10).

The AWARDS Process and Operating Plan (Goal 1)

AWARDS and its Disciplinary Society partners share the understanding that the problem of under-representation of women and minorities in awards is a real phenomenon, supported by data, and that it is a problem shared by virtually all disciplinary societies due to historical patterns that arose before the scientific ranks became more diverse. All collectively acknowledge that participating Societies sincerely

want their awards nomination and selection processes to be fair and that AWARDS will support them as they identify and eliminate barriers to award equity.

The AWARDS operating plan to achieve Goal 1, i.e., developing processes customized for each Society to foster the diversity of their scientific award recipients, has been designed with three major principles in mind: 1) Each society must retain control and ownership of activities leading to change within that society; 2) Progress will be facilitated by continued input from AWARDS staff and volunteers trained in gender equity issues; and 3) Operational leadership must be provided by individuals well-versed in organizational dynamics. This design was informed by the importance of "organizational catalysts" within the organization as change agents (Sturm 2007).

The organizational components of the plan are:

- An AWARDS Executive Committee to direct the AWARDS project, monitor work with partner Societies and plan for long term continuance of award equity work.
- An AWARDS Task Force composed of volunteers from AWIS, AWM, and other disciplinary societies who will be trained in equity issues, disciplinary society structure and organizational dynamics and will lead workshops, training, and other activities in the partner Societies.
- An AWARDS Advisory Committee with experienced social and STEM scientists to advise on design of benchmark surveys and recommended changes to Societies, suggest resources, and facilitate the incorporation of appropriate strategies.
- The AWARDS Project Manager with expertise in the methodology of organizational dynamics who will coordinate activities, function as administrative staff and serve as the key contact point for the project.

More details on these AWARDS components are found in the Management Plan (pg 12). In addition, each society will form an Awards Action Group with responsibility to choose, initiate and manage actions within the society (see pg 9 for more details).

AWARDS will facilitate change within its Disciplinary Society partners through the following inputs:

1) Interactions supportingcultural changes: In order to have a lasting impact, AWARDS will work with the seven partner Societies to incorporate recommendations and lessons adapted from previous projects and social science research (see pp. 3-5, this proposal) into awards nomination and selection processes. AWARDS will act as a facilitator of change within the partner societies, and will lend credibility to their efforts. An intensive three-phase process is envisioned for work with partner Disciplinary Societies, with activities taking place over 2-3 years. Participation by members of Women's and Diversity committees are intended to promote their leadership skills, impacting the Society's culture.

Phase 1 – Initial data gathering and awareness building: A customized report by RAISE will provide initial data on the Society's awards and award recipients over time. AWARDS will assist the Societies in making their existing organizational culture and practices transparent using a Benchmark Survey. A face-to face meeting in the first participation year and subsequent teleconferences will provide resources on strategies to effect change within institutions. Examination of these data and resources is expected to stimulate discussion and the awareness of inequities, as it has at academic institutions such as those that have participated in ADVANCE grants.

Phase 2 – Creating and implementing a multifaceted action plan to increase award equity: Awards and Benchmark Survey data will provide a basis for the action plans that will be developed by each Society working in concert with the AWARDS Executive Committee. The plans will contain components modeled after those found in successful diversity management programs (*Beyond Bias and Barriers* 2006;

see pg 5 of this proposal for a summary). The AWARDS Task Force will develop customized resources for the Society adopted from successful equity programs, and coach a cadre of members and leaders within the Society to implement components of their individual action plans. New practices, relationships and norms are expected to evolve within the Societies from these activities.

Phase 3 – Creating and implementing a sustainability plan: Ongoing monitoring of the outcomes from organizational changes by the partner Societies will be a key to sustained impact. These efforts will be supported by a two-way reporting system with RAISE. Responsibilities for these sustained changes may result in new responsibilities for existing organizational structures, or creation of new structures.

2) Organized data on awards, structure, and processes: The AWARDS Benchmark Survey will be developed by Co-PI Lincoln, with input from the AWARDS Advisory Committee and representatives from STEM women's caucuses and committees (through additional CCCR conversations). This survey will serve as a pre-test. Using findings from previous research, the Survey will assess organizational practices and participant perceptions relevant to the practices by which nominations are solicited, award selection committees are developed, and prizes are awarded within each disciplinary Society. Before suggesting appropriate research-supported changes, AWARDS will need to know much about the structure and culture of the society, for example: **How do selection committees arise and how are they structured**? (Are members appointed? If so, by whom? Are there criteria used to select members? Is the selection of committee membership public? Is there a formal committee chair? If so, how chosen?)

To begin, RAISE staff will create reports for each Society that examine the gender equity of their awards. These Society-specific reports will include 1) a listing of all awards and awardees; 2) when available, a list of members of award committees; and 3) the RAISE score (see pg 2). These data give AWARDS a quantitative monitor of the effect of the intervention and an objective way to compare the progress of different Disciplinary Societies over time. AWARDS will assist partner Societies in tracking the composition of award committees when such data are not immediately available.

3) Suggested strategies for reducing bias: AWARDS input from the Executive Committee, Advisory Committee and/or Task Force into the partner Societies will help identify possible barriers to achieving gender equity and suggest strategies for addressing them. These strategies will build on similar work occurring in a number of venues across the country such as:

- Workshops on increasing nominations from women and minorities, e.g., adapted from ADVANCE committees at the Universities of Wisconsin (WISELI) and Michigan (STRIDE), and the NSF Divisions of Chemistry and Physics
- Workshops on faculty searches, e.g., from WISELI, STRIDE, adapted to evaluating awards
- Suggestions for changing awards practices to decrease bias, e.g., the NIH PIONEER award framework
- Print and on-line resources to increase awareness of unintended bias (adapted from social science research)

The AWARDS Task Force will conduct these activities with staff, elected leadership, and interested members of the Disciplinary Society partners. However, long-term change within the Societies requires that its members be skilled in teaching this information and procedures to others within the Society without direct input from AWARDS personnel. Thus, the Task Force will also conduct Train-the-Trainer workshops for volunteers from the partner Societies, especially from leadership of awards committees and members of women's and diversity committees. This will create a cadre of members prepared to independently lead activities on learning about gender schema, best equity awards practices, etc. within the Society beyond the AWARDS grant period. All workshops, including Train-the-Trainers, will

involve active learning, peer education, and use adult learning strategies that respond to participants' existing knowledge, experiences, and expertise. This cadre of change agents will ensure that the AWARDS effects will be sustained over time.

Action plans incorporating such materials and approaches are expected to take a year to be put in place, given the annual or biannual frequency of most award processes and the volunteer governance structures of many disciplinary societies. The AWARDS Executive Committee and Task Force will create resources on equity practices, e.g., research summaries and workshop templates that support the proposed action and sustainability plans.

Disciplinary Society Partners and Their Work with AWARDS

In seeking partners, the AWARDS leadership looked for a breadth of societies among those who had expressed enthusiastically an interest and willingness to explore the possibilities of systemic awards change. The disciplines of the Partners are varied, including biological science, physical science and mathematics. They include research focused societies (SfN, AGU, AMS, ACS), an applied and industrial focused society (SIAM), one with more general disciplinary focus, including education (MAA), and one whose membership spans academe, business, and government (ASA). Participation was initiated in SfN by their executive committee, in the ACS by the Board Committee on Grants and Awards, and in AGU by leadership in one Section. Participation by the mathematics societies was catalyzed by the Association for Women in Mathematics which will continue to support gender equity award activities in the Partners and additional mathematical societies. By studying how each of these societies engaged in the AWARDS process, the project will develop a framework for assisting a wide range of additional societies to engage in AWARDS-like improvement plans.

Below is the general plan of work for each Society partner, listing the decisions and actions they will take to manage their change process.

Establishing a structure to support and own the process: Successful outcomes of the project depend on both the professional and volunteer leadership of each Disciplinary Society partner. Each Society will designate the leader who will form and chair the **Award Action Group**. This committee should include the following types of members: representatives of the women's committee/caucus and minority or diversity committees; administrative staff (Executive Director or designee); Society leadership (President or designee); awards committee leadership; and others, as desired by the Society. Members of the AWARDS Executive Committee and Task Force leadership will participate as requested. The responsibility of each group is to choose and initiate the actions that will increase the equity of their Society's awards and to lead the organizational changes that will sustain them.

***Developing in-depth understanding of the organization's current structure and processes*:** Each Society's Award Action Group will gather data to complete the Benchmark Survey within a specified time frame. It will examine and analyze the data on awards provided by the RAISE report.

Implementing actions to increase awards equity: With input from the AWARDS Executive Committee, each Award Action Group will develop an action plan and timeline for organizational and procedural changes. This committee will also identify who will have responsibility for each aspect of change, including selecting the cadre of members trained via Train-the-Trainer workshops who will sustain the education of members and leaders about unintended biases and best equity practices. The action plan will then be implemented with assistance from the AWARDS Task Force.

Evaluating and sustaining changes: Each Award Action Group, with assistance from the AWARDS Project Manager, will gather data and assess the effectiveness of changes to organizational practices and

the organization at six month intervals. It will also develop a sustainability plan for ensuring that the changes will be maintained over time. At the end of Year 3 of the AWARDS grant, the Award Action Groups will again complete the Benchmark Survey and meet face-to-face to assess the cumulative effort of AWARDS activities on organizational structure, process, and climate.

Sharing experiences and success: Each Award Action Group, with the approval of the Society's leadership, will choose how, when, and where to publicize its efforts to increase award equity; such responsibility is a key part of ownership of the process by the Disciplinary Society partner.

AWARDS will provide financial resources to the partner Societies to partially fund their participation in four types of activities: 1) attendance at face-to-face meetings at the beginning of their participation and end of the project with representatives from all Society partners and members of AWARDS leadership; 2) expenses for data gathering on awardee gender and on processes and procedures related to awards; 3) expenses for educating and training members and leaders about research on equity and equity practices, including support for Task Force members; 4) implementing changes to existing practices; and 5) tracking costs associated with AWARDS activities. The face-to-face meetings are intended to promote community and synergy, as the partners develop their individual approaches to achieving the goals of AWARDS, and learn with and from one another's efforts and outcomes. The remaining activities are to ensure that partner Societies have resources that permit a systems approach to increasing Society award equity. The AWARDS plan has been based on research in other venues, primarily academia. By providing resources that can be used for data generation, education, training, and/or organizational changes, Societies will be able to demonstrate "proof of concept," i.e., provide evidence to Society leadership and others that research adapted from other venues will result in significant change in their award outcomes and directly benefit the careers and rewards for women STEM professionals in academia and elsewhere. Because so many Societies choose to join AWARDS, partner Societies will be phased in, with three societies participating in Year 1 and all remaining Societies initiating work by Year 2.

Expanding AWARDS and Sustaining It Over Time (Goal 2)

The effect of AWARDS on the seven Disciplinary Society partners is expected to be profound, and as noted above, will require their development of new maintenance policies, e.g., charging some part of their organization with annual collection of award equity data. The true promise of AWARDS is in learning from these seven pioneer Societies how change happened within their society, creating a framework and cost effective pathway for other societies to conduct similar efforts, and in examining alternative ways of engaging additional Disciplinary Societies in the pursuit of award equity.

Adapting AWARDS activities to societies with different characteristics: The AWARDS Executive Committee, Task Force, and Advisory Committee will analyze the evaluation data from Society partners to identify patterns of work and accomplishments, and to examine how barriers to proposed changes were overcome. They will also assess the role of AWARDS in facilitating those changes, and the costs associated with various activities. On the basis of these inputs, the AWARDS Executive Committee will create a **Flexible Framework** for use by other STEM disciplinary societies. This template will describe the AWARDS process in detail, alternative ways of selecting and implementing changes that respect the Society's structure and processes, costs for conducting such a process, and potential outcomes of award equity activities. It will also identify members of the AWARDS leadership team and Task Force members who could assist additional societies in developing award equity projects.

Testing an alternative change model: the role of AWM: The Association for Women in Mathematics (AWM), an organization that promotes equal opportunity and treatment of women in the mathematical sciences, will partner in this grant by providing leadership to participating mathematics Societies in award equity efforts and by recruiting AWARDS Task Force members through its network. AWM has a

membership of 3000 women and men mathematicians. Members represent a broad spectrum of the mathematics community, and typically are members of additional mathematics societies, e.g., the Association for Symbolic Logic. AWM is also connected with the governance of these societies; for example, Suzanne Lenhart, an active AWIS member who is a past president of AWM, is a member of the SIAM Board of Trustees. AWM members who serve on the AWARDS task force and who have enhanced their knowledge of equity practices will not only provide support for AWARDS Society partners, but additionally will recruit and lead award equity efforts in additional mathematical societies of which they are members. This will provide a test of whether a concerted group of equity advocates can use AWARDS resources and structures within their disciplines, e.g., workshops at Math Institutes (short conferences devoted to specific topics) or the Joint Mathematics Meetings, to catalyze change in award equity in the absence of continual input from AWARDS leadership. Such learning will be shared with other women's disciplinary organizations, e.g., the Society of Women Engineers, who might play a similar role for engineering societies.

Resources for the flexible framework: On the basis of AWARDS evaluation data, the Executive Committee and Task Force will direct resources to support the AWARDS Flexible Framework above, including the following:

- The Benchmark Survey
- Print, mediated, and web-based resources that describe best practices for award equity
- Workshops on best equity practices
- Train-the-Trainer workshops
- Cost estimates for implementing various change processes

The AWARDS Project Manager will post these resources on AWIS and RAISE websites, and identify and implement links to other useful resources. These resources will explicitly encourage additional disciplinary societies to initiate a process to increase their award equity, through consultation with AWIS and RAISE staff, and other AWARDS participants.

Continued awards data generation: RAISE will re-organize its database to facilitate cross discipline compilations of awards data, and develop mechanisms, e.g., on-line check lists, to facilitate Disciplinary Society generation of awards data and simplify annual updates of that data.

Dissemination

Publicizing outcomes: Disciplinary Society partners and the AWARDS Executive Committee will prepare publications for disciplinary, e.g., AGU's Eos, and general science journals.. The AWARDS Executive Committee will present AWARDS outcomes at events that provide opportunities for such presentations, e.g., meetings of the Conference Board of the Mathematical Sciences, AAAS, and social science society conferences. A template of this presentation will be made available for use by any of those who have been participants in the AWARDS process. The AWARDS Executive Committee will also create a workshop template for presentation of successful AWARDS activities at Disciplinary Society meetings; AWARDS participants, e.g., Task Force members and others who participated in Train-the-Trainer workshops within partner Societies, will be encouraged to conduct these workshops. AWM will also champion the use of multi-society resources within the mathematics community to continue engaging additional mathematics societies in this work.

Beginning at the end of Year 1, the AWARDS Executive Committee, in collaboration with the Award Action Groups, will create a description of AWARDS processes and outcomes to post on AWIS, RAISE and Society websites based on partner Society's semi-annual reports and analysis of formative evaluation data. The RAISE website (www.raiseproject.org) will play a key role in disseminating AWARDS findings. The RAISE homepage will be modified to include a section to assist disciplinary societies in equity efforts. AWARDS partners will have a space in which they can contribute their revised policies

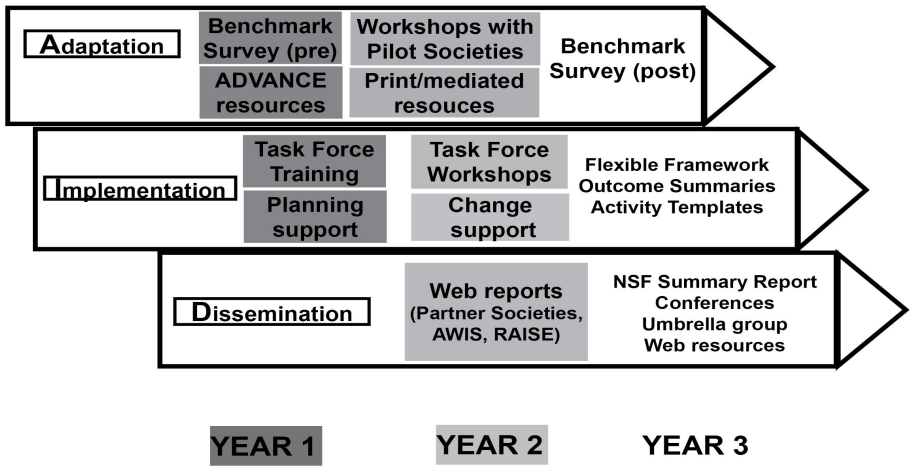
and blueprints for change. The RAISE website will become a site noted for information, expertise and guidance on the pathway to gender equity in awards.

Other AWIS venues, including its magazine and on-line newsletter, will be media outlets. The AWIS Awards and Equity Committee will begin in Year 1 to use its existing quarterly teleconferences, CCCR, with representatives of women's caucuses of STEM disciplinary societies to:

- enlarge and share the literature base on factors that affect gender equity in STEM awards;
- describe benchmarking, its intent and categories and its role in implementing organizational change;
- describe RAISE data, what a customized RAISE report consists of, the need and a society's role in updating RAISE data, etc.;
- solicit participants for AWARDS Train-the-Trainer workshops to create an expanded core group of facilitators who can lead AWARDS activities;
- provide a venue for Disciplinary Society partners to provide updates on their progress; and
- publicize costs data for AWARDS activities, and guide other disciplinary societies that would like to self-fund AWARDS-type activities.

Develop and publicize AWIS certification of societies with equitable award processes: The initial Society partners of AWARDS are pioneers in efforts to increase award equity through increased transparency in award processes and other cultural and organizational changes. They, and others who engage in similar efforts, are worthy of recognition for their accomplishments. Therefore, the AWIS Awards and Equity Committee will develop criteria, application and selection procedures to acknowledge disciplinary societies that have created more equitable and sustainable processes for their awards. Certifications will be publicized on the AWIS and RAISE websites, press releases, etc., as they are earned. By year 3, the AWIS Board will begin giving one award annually to the organization that has contributed innovations to gender-equity award procedures, or that has made substantial improvements in the equity of its awards.

Implementation Timeline



Management Structure

Executive Committee: A four-person Executive Committee will direct the AWARDS project, work with partner Disciplinary Societies and their designated leadership to implement changes to awards practices and organizational structure, and implement a sustainability plan based on analysis of the AWARDS experiences of the partner societies to expand AWARDS-type activities to additional societies. PI Elizabeth Kean, Chair of the AWIS Awards and Equity Committee, will chair the Executive Committee and direct the work of the Task Force (see below). She has a 20-year history of leading systems reforms in projects that cross disciplines and educational levels and in design of workshops that lead to organizational changes. Co-PI Janet Bandows Koster, AWIS Executive Director, will be responsible for the budget and will support the day-to-day work of the Project Manager who will work out of the AWIS office. Co-PI Stephanie Pincus, co-founder of the RAISE Project, will direct generation of award data reports and dissemination of results on the RAISE website. Co-PI Anne Lincoln, a sociologist with expertise on awards, will develop the benchmark survey and initial recommendations for partner Society work; she will seek input from and coordinate the work of the Advisory Committee (below), and direct internal evaluation efforts. The Project Manager will play a key role in ensuring that communication among all facets of the grant and all activities are coordinated, and well as providing expertise in organizational change; she will also support development of resources, e.g., workshop templates. Applications for the full-time position of Project Manager will be sought as per recommendations from organizational dynamics faculty in the Washington, DC area, and will be selected by the Executive Committee members as soon as funding is confirmed. The Executive Committee will meet twice per month by teleconference, and will convene annually at the AWIS office in Washington, DC.

Advisory Committee: The AWARDS Advisory Committee is composed of experienced scientists with diverse backgrounds and experiences related to the AWARDS activities, including an expert in organizational change. The committee will advise Co-PI Lincoln on design of the Benchmark Survey and analysis of completed Surveys, and on changes recommended to partner Societies to promote award equity. Their expertise will enable them to suggest resources for use by AWARDS partners and ensure that appropriate social science strategies and insights are incorporated into the AWARDS work.

The following people have agreed to serve on the Advisory Committee:

- Elaine Ecklund, Assistant Professor of Sociology, Associate Director, Center on Race, Religion, and Urban Life (CORRUL), Rice University
- Geraldine Richmond, Richard M. and Patricia H. Noyes Professor of Chemistry, University of Oregon (Committee on the Advancement of Women in Chemistry, COACh)
- Jennifer Sheridan, Executive Director & Research Director, Women in Science and Engineering Leadership Institute (WISELI), University of Wisconsin-Madison
- Susan Sturm, George M. Jaffin Professor of Law and Social Responsibility, Columbia University.

The Advisory Committee will teleconference early in Year 1 to discuss its role in AWARDS, and periodically by conference call and written communication thereafter, as needed.

Task Force: A minimum of fourteen volunteers (two for each partner Society) from the AWIS Awards and Equity Committee, AWIS membership and other STEM societies (recruited through the CCCR teleconferences) along with an additional eight volunteers from AWM will receive training on award and equity issues and on effective teaching in professional settings, drawing heavily on prior work in ADVANCE and other sources as identified by the Advisory Committee and PI's. Under the direction of PI Kean and the Project Manager, they will provide technical assistance to partner Societies in implementing changes, including the training of Society members and leaders as organizational catalysts

to sustain award equity processes over time. Much of the work of the Task Force will be conducted by teleconferences, supplemented by participation as appropriate in the periodic meetings of the Societies.

Evaluation

Janet Malley, the AWARDS External Evaluator, is Associate Director of the Institute for Research on Women and Gender at the University of Michigan and Director of Evaluation for all program initiatives, climate assessments, and tracking of institutional indicators undertaken by the UM's ADVANCE Program. Dr. Malley has significant expertise in and experience with quantitative and qualitative data analysis and program evaluation.

The goal of the AWARDS project is to reduce gender bias in STEM awards by crafting discipline-sensitive, effective, and sustainable Disciplinary Society interventions. Through formative and summative evaluation, the Executive Committee and external evaluator will examine five aspects of AWARDS activities:

- Benchmarks: Surveys used for both short- and long-term impact assessment
- Learning: Change in participants' perceptions and knowledge about under-represented groups and impartiality
- Behavior: Change in organizational award nomination practices
- Results and Impact: Demonstration of the potential for long-range impact of the program as a consequence of initiation of their sustainability plans and cultural changes within the society
- Interactions within Disciplinary Societies and between Disciplinary Societies and AWARDS personnel

The Executive Committee, with input from the Advisory Committee and Evaluator Malley, will develop formative evaluation instruments; it will collect and analyze the formative data, with feedback shaping subsequent activities of the project. Instruments will include participant satisfaction surveys, and post-activity surveys to measure impact on knowledge, attitudes and resultant actions. Descriptions of processes and interactions (for example, who participates in specific activities and makes choices about organizational changes) will be collected. Important metrics that will be examined periodically over the course of the project include:

- Participants' use of existing resources that inform awards processes, e.g., use of RAISE data bank and ADVANCE-based resources;
- Participants' awareness of literature on the impact of implicit biases on judging potential awardees;
- Involvement of Society leadership and other segments of the Society;
- Interactions between Society leadership and representatives from women's caucuses and organizations within their discipline;
- Changes in awards processes within partner Disciplinary Societies; and
- Increased participation of women in the award process.

The external evaluator will advise the Executive Committee on the critical components and effectiveness of the formative evaluation data. In addition, the external evaluator will be responsible for the summative evaluation components:

- Analysis of the design, use, and evaluation of the Benchmark survey (pre- and post-AWARDS).
- Analysis of use of AWARDS resources by different types of societies, and linkage of use to characteristics of the organizations.
- Identification through surveys, focus group interviews, and other appropriate measures of the extent to which changes in disciplinary awards processes have resulted in long term changes of nomination patterns, award outcomes, etc. as a result of AWARDS activities in partner organizations

- Analysis of how partner societies' characteristics, e.g., structural elements, sources of innovation within the organization and the function of organizational catalysts, impacted changes in the culture of the organizations and resultant award outcomes.
- Analysis of how effective AWARDS processes and resources are in engaging additional societies in examining and altering their awards practices and organizational structures.

Broader Impacts

AWARDS is designed to create a sustainable framework for assuring progress towards more equitable rewards and recognition for women and members of underrepresented groups in a wide range of scientific communities. Its influences, however, will extend beyond increasing the numbers of awards given to diverse STEM professionals in its partner Societies. It will provide encouragement to women and other under-represented groups already pursuing scientific endeavors and increase their retention and recognition. Increased gender, racial, and scientific diversity and enhanced visibility of role models will inspire subsequent generations to pursue STEM careers.

Workshop/print/presentation materials are resources that can be made available to large numbers of disciplinary societies to support self-study of their reward system and other cultural practices. Such low cost support will provide dissemination beyond the organizations that will be directly affected during the PAID grant period. Trained personnel in the AWARDS Task Force and within partner Societies also will be available to provide advice and assistance to other societies seeking to increase award equity (cost estimates for such work will have been developed). Most disciplinary society members have an institutional home within higher education, foundations, non-profit organizations or corporations. Thus, AWARDS participants will be able to provide leadership for equity within those home institutions as well.

Activities of the AWARDS project will result in changing perceptions of equity issues by the official leadership in disciplinary societies. The AWARDS project activities will also put members of gender and other diversity committees in leadership roles, and enhance the stature and power of those committees. As they interact with the societies' leadership and staff, these members will build their ability to effect change within their societies.

Changes in individual and collective behaviors that minimize the barriers for awards are anticipated to carry over into other institutional activities, such as selection of speakers and election of leaders, as well as allocation of resources or changing awards to more fully represent the range of skills and activities needed in the 21st century. This is a major force in affecting equity practices far beyond the targeted Societies in AWARDS and even those institutions that have had the benefit of the ADVANCE programs.

In sum, as scientific labor force demographics change, it is essential that policies and practices reduce bias and barriers, promote retention in professional environments, provide leadership opportunities to diverse STEM personnel, and maximize and sustain the contributions of all scientists, both women and men. Full engagement of all trained individuals is critical for an educated, productive society in our increasingly competitive and interconnected global society.

AMS
AMERICAN MATHEMATICAL SOCIETY

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George E. Andrews, President
andrews@math.psu.edu

February 16, 2009

Dr. Janet Bandows Koster
Executive Director
Association for Women in Science (AWIS)
1200 New York Avenue, NW
Suite 650
Washington, DC 20005

RE: Letter of Support for AWIS AWARDS Project

Dear Dr. Bandows Koster:

The American Mathematical Society strongly supports the goal of achieving equity in rewards and recognition for women and members of underrepresented groups. Our society, the AMS, is interested in the equity issue as it affects all of science and engineering, even more so within the mathematical sciences and, of course, particularly with respect to the AMS itself.

As a result, the Society pledges its support for the AWARDS project designed by the Association for Women in Science. We intend to provide data about awards made by our society and to provide information about the awards processes, including committee composition characteristics, nomination procedures, solicitation procedures, and selection practices. If asked, we will designate key people to work closely with AWIS to analyze and assess practices and outcomes.

The American Mathematical Society, with more than 30,000 members, makes 15-20 awards to individuals per year. As one of the primary professional societies for mathematicians, our participation in the study is essential for accurate information about the discipline. We are pleased to take part in this study and look forward eventually to obtaining recommendations about best practices, as well as learning the other results of this extensive, potentially useful study.

Sincerely yours,

George E. Andrews

GEA:sjr

cc: Dr. Donald E. McClure, AMS Executive Director
Professor Robert J. Daverman, AMS Secretary
Dr. Ellen J. Maycock, AMS Associate Executive Director

Joint Membership in AMS, MAA and SIAM

In late November 2009, we received some results from a market survey carried out to learn the level of interest and expected numbers of participants in a new category of joint membership in the AMS, the MAA and SIAM. The specific proposal came out of a meeting in January 2009 that included the Presidents and Executive Directors of the three organizations. In broad terms, the combined membership would give an individual the benefits of "Regular" membership in all three organizations for a cost just slightly greater than the sum of the dues of any two organizations.

Here we consider two possible ways of sharing the dues revenue:

Model 1, Equal Percentage Discounts: The three organizations would share dues revenue in proportion to their current individual dues.

Model 2, Equal Dollar Discounts: The three organizations would each incur an equal dollar amount as the discount to their current individual dues.

For 2010, the dues for Regular membership are:

Society	2010 Dues (Regular)	Main Benefits
AMS	$168 (High)	*Notices* and *Bulletin*
MAA	$190	*Monthly* and *Focus*
SIAM	$130	*SIAM Review* and *SIAM News*

In the survey, a combined discounted dues of $375 was suggested. This is about 5% more than the sum ($358) of the AMS and MAA dues. It is $113 less than the sum of the AMS, MAA and SIAM dues. At this level, a person who is already a member of AMS and MAA could add the SIAM membership for $17 per year.

Some key data from the market survey are summarized here.

Current Membership	Population Size	Definitely Join All 3	Probably Join All 3
AMS Only	5,078	5.2%	10.4%
MAA Only	10,647	3.6%	13.5%
SIAM Only	4,462	5.2%	14.2%
MAA+AMS	3,434	13.5%	22.8%
MAA+SIAM	398	21.5%	30%
AMS+SIAM	1,108	13.2%	23.6%
AMS+MAA+SIAM	527	100%	

To do a fairly thorough analysis, one would need to compare different scenarios. We have started doing this. For the present summary, I shall present the results based on conservative estimates of the number from each category above who would actually opt for the new joint membership; in particular, I assume that 100% of those who answered that they would definitely join all three would do it in the end. For example, I estimate the number of individuals who are currently members of AMS-Only who would opt for the new joint membership to be 5.2% of 5078, or 264. This will probably give an underestimate of the actual numbers, but not a huge underestimate.

Projections

Model 1, Equal Percentage Discounts

The effective discount is $113 from the combined individual dues of $488, or 23%. With a 23% discount, the discounted dues of $375 would be shared as follows:

AMS $129.10; MAA $146.00; SIAM $99.90.

Based on the survey data, we can estimate the effect on dues revenue for each of the three organizations and the number of new memberships each would gain.

Society	95% Confidence Interval for Change in Dues Revenue	95% Confidence Interval for Number of New Members
AMS	$36,000 ± $7,000	701 ± 51
MAA	$29,600 ± $7,600	642 ± 49
SIAM	$81,200 ± $6,500	1,111 ± 64

Model 2, Equal Dollar Discounts

The effective discount of $113 from the combined individual dues of $488 would be divided equally into equal dollar discounts of 113/3 = $37.67. The discounted dues of $375 would be shared as follows:

AMS $130.33; MAA $152.33; SIAM $92.33.

Based on the survey data, we can estimate the effect on dues revenue for each of the three organizations and the number of new memberships each would gain.

Society	95% Confidence Interval for Change in Dues Revenue	95% Confidence Interval for Number of New Members
AMS	$38,600 ± $7,000	701 ± 51
MAA	$42,900 ± $7,800	642 ± 49
SIAM	$59,200 ± $6,100	1,111 ± 64

On the expense side, there are costs of fulfilling the membership. For the AMS, the cost of printing and delivering *Notices* and *Bulletin* is about $32 per year, so the expected marginal cost of fulfilling 700 new memberships is about $22,400 per year. In addition, there will be significant costs to set up and maintain the combined membership records.

Our analysis at this time is not complete enough to frame any specific proposals. We are continue our discussion of the implementation issues: how do we make the process of joining and renewing membership simple and foolproof? How do we assure that each society has a direct relationship with each of its individual members.

Don McClure

AMERICAN MATHEMATICAL SOCIETY
TRUSTEE LIAISON ASSIGNMENTS TO DIVISIONS FOR 2010

Division (Director)	**Board Liaisons**
Executive Director (McClure) Deputy Executive Director (includes Development) Human Resources	John Conway Ron Stern
Editorial (Sergei Gelfand) Acquisitions	Mark Green Karen Vogtmann
Finance (Connie Pass) Facilities and Purchasing Fiscal	John Franks Linda Keen Karen Vogtmann
Information Services (Tom Blythe) Business and Publications Computing Systems and Operations	John Franks Mark Green
Mathematical Reviews (Graeme Fairweather) Administration Associate Editors Bibliographic Services Copy Editors Reviewer Services/ Production Slavic Languages Systems Support	Linda Keen Carol Wood
Meetings and Professional Services (Ellen Maycock) Meetings and Conferences Membership and Programs Public Awareness	Ron Stern Carol Wood
Publishing (Beth Huber) Distribution Member and Customer Services Printing Production (includes Electronic Prepress and Creative Services) Sales Administration	Mark Green Ron Stern
Washington Office (Sam Rankin)	John Conway Carol Wood

EXECUTIVE DIRECTOR DIVISION
Donald McClure, Executive Director

This Division contains three Departments:

- Executive Director Department (the ED and his immediate support staff)
- Deputy Executive Director Department
- Human Resources Department

The summary of 2009 Activities for the latter two Departments is included below.

DEPUTY EXECUTIVE DIRECTOR DEPARTMENT
Highlights of 2009 Activities
Gary Brownell, Deputy Executive Director

Summary

Most of the activities planned for 2009 were accomplished. The Department's expenses closed the year at 100.7% of budget.

Highlights

Development
Development activities include cultivation of major donors, processing and acknowledging donations, preparing monthly reports on the status of donations, maintaining development pages on the AMS website, the year-end appeal, assisting donors with planned giving arrangements when necessary, and promoting the Thomas S. Fiske Society. These responsibilities are shared between two departments - the Executive Director Department and the Deputy Executive Director Department.

In 2009, one planned activity (creating a new YEA brochure and advertising for the *Notices*) was deferred to 2010 due to the Society's focus on planning for a new fund raising initiative.

Business Continuity Planning
Global spread of the H1N1 virus in 2009 put prior years' pandemic preparedness efforts to work. The existing AMS Business Continuity Plan was reviewed and determined to be relevant, and several responsive actions were taken.

Records Management
In 2009 the majority of Records Management (RM) functions were on-going and routine in nature. There was one non-routine event. The wife of Lincoln Durst (Deputy Director of the AMS from 1970-1985) contacted the Society regarding AMS records she was interested in donating. Seven boxes of records were received and reviewed for historical or administrative value. The box contents were interesting, but most of the content with historical value had already been inventoried and addressed by the AMS Records Management and Archives Project, a two-year (1990-1992) National Historic Publications and Records Commission (NHPRC) grant funded project.

Prepared April 15, 2010

HUMAN RESOURCES DEPARTMENT
Highlights of 2009 Activities
Tammy King Walsh, Director

Summary

2009 Human Resources activities and functions were generally on-going and routine with all of the activities planned for the year accomplished. The Department's expenses closed the year at 85.7% of budget.

Highlights

Human Resources Information System
2009 activities focused on improving access to employee information. The migration from ADP's PC-based product to a web-based Human Resources Information System (HRIS) resulted in real-time access of various functions and information, while eliminating the need for Systems and Operations to provide hardware and maintenance support. All staff received electronic access to pay statements and in 2010 will be provided with additional functionality via the self-service web portal.

Electronic Documents

Significant effort was made to scan paper documents for electronic storage, in accordance with current record retention policies and practices. Going forward this will reduce the space needed to file large quantities of paper, as well as the time needed to retrieve information. When ADP employee self-service is fully functional, electronic documents will provide staff with faster, easier access to forms, documents, and records.

Recruitment

After implementation of the HRIS, the recruitment module was integrated with the other HRIS modules resulting in an efficient, seamless electronic process for tracking applicants throughout the recruitment process (from posting open positions through on-boarding of new hires).
The department finished out the year down 0.8FTE with the retirement of a 16+ year staff member.

Prepared April 19, 2010

EDITIORIAL DIVISION
Highlights of 2009 Activities
Sergei Gelfand, Publisher

In their role as Acquisitions Editors, Sergei Gelfand, Ed Dunne, and Ina Mette traveled to approximately 25 various locations, attending 20 national and international meetings and visiting more than 25 mathematics departments in the US and abroad. These trips included attendance at the following meetings: International Congress on Mathematical Physics (Prague), SIAM Annual Meeting (Denver), Park City Summer Institute, Meeting of the Canadian Mathematical Society (Windsor, Canada), Joint OMG (Austrian Math. Society)—DMV (German Math. Society) Meeting (Graz, Austria), British Mathematical Society Meeting (Galway, UK), British-Nordic Congress (Oslo), I. Singer 75th Birthday Conference (Cambridge, MA), Dobrushin Memorial Conference (Moscow), H. Lenstra 60th Birthday Conference (Amsterdam), Current Developments in Mathematics Conference (Cambridge, MA), as well as eight National and Sectional meetings of the AMS.

In 2009, Acquisitions Editors put forth approximately 300 new proposals to prospective authors, with about 40% of them developing into viable book projects. Notable books published in 2009 include:

Embeddings in Manifolds, by R. Daverman and G. Venema

Training Manual on Transport and Fluids, by J. Neu

Computational Topology: An Introduction, by H. Edelsbrunner and J. Harer

Not Always Buried Deep: A Second Course in Elementary Number Theory, by P. Pollack

Lectures on Quantum Mechanics for Mathematics Students, by L. Faddeev, and O. Yakubovskiĭ

Differential Equations, Mechanics, and Computation, by R. S. Palais and R. A. Palais

Other important activities of the Editorial Division/Department (EDD) in 2009 included the following:

- Software for the new peer review system, EditFlow, was incorporated into AMS journal production and is now being used by all four AMS primary journals (JAMS, MCOM, PROC, TRAN), as well as by *Memoirs of the AMS*, and two electronic journals of the AMS.

- In December 2009, EDD began taking steps to develop a procedure for identifying and removing access to AMS titles which are being posted illegally (pirated) online. EDD adapted its current procedures from resources provided by the *American Association of University Presses* (AAUP) and the *Society for Industrial and Applied Mathematics* (SIAM). To date, access has been removed to approximately 300 AMS titles which were being made freely available for download through links indexed on websites such as Addebook.com and AvaxHome.ws. EDD will continue ongoing monitoring of popular index and host sites in an effort to minimize access to illegally posted AMS material.

Prepared April 2010

FINANCE DIVISION
Highlights of 2009 Activities
Constance Pass, Chief Financial Officer

The Finance Division consists of the following two departments, under the Chief Financial Officer, Connie Pass.

- Facilities and Purchasing, Patricia Hickey, Manager
- Fiscal, William Olson, Controller

The majority of the functions performed by the departments comprising the Finance Division are on-going and routine in nature. However, there were several significant events and activities accomplished in 2009, often through the combined efforts of departments both inside and outside of the division. These events and activities included:

Purchasing and Facilities:

- Facilities & Purchasing Department staff became more skillful in using the Epicor Inventory, Purchasing and Receiving software modules.
- Overhead office lighting was replaced and occupancy sensors were installed in the Providence facility, resulting in costs savings.
- Packaging supplies were assessed and most custom or special order items were eliminated, which results in costs savings.
- New printing equipment was purchased and installed
- All voice and data services were switched to a new provider, providing cost savings.

Fiscal:

- Design and implementation of FRx financial reports for the Epicor suite of financial modules. The new reports include the department and projects report formats (5 year comparisons and actual-to-budget) used in the Ross accounting system, as well as aggregated reports for divisions and sub-divisions. Specialized reporting packages were created for each financial report user according to each user's specifications. Reporting on natural accounts (balance sheet, revenue and expense accounts) were also developed, as well as the Trial Balance report, A and B Pages.
- The accounts Payable and General Ledger modules were used for a full year. Staff developed operating procedures during the year to use the software most effectively and efficiently. Staff is in the process of documenting the related policies and department procedures for these modules.
- Other modules used for part of the year include STAR Projects and STAR Web TimeRecorder, and Advanced Allocations. Documentation of policies and procedures for these modules is in the process of being written.
- Settlement agreement with Epicor Consulting was negotiated with a fixed fee amount for completion of implementation and correction of known issues, which was approved by the BT in early 2010. Modules yet to be installed and implemented are Active Planner (for budgeting), Royalties (for determination and payment of royalties to authors) and Business Intelligence (executive reporting tool).
- Completion and filing of the new From 990 for 2008, which required significantly more work and disclosures than in previous years.

For additional information regarding the Financial Software Implementation, see Item 3.6 and its Attachment.

Total 2009 Finance Division costs (as of 12/31/09, final)

	Actual	Budget	Variance	% Used
Personnel costs (a)	966,250	978,791	12,541	98.7%
Operating costs	1,245,728	1,176,078	(69,650)	105.9%
Allocated costs (b)	173,024	452,647	279,623	38.2%
Total	2,385,002	2,607,516	222,514	91.5%

(a) Personnel costs exclude expected variances which are recorded in a Finance Division department
(b) Allocated costs exclude allocations from within the division's departments

The negative variance in operating costs and the positive variance in allocated costs from budgeted amounts both result from a change in accounting policy for computing and printing equipment and software used exclusively by one department. These costs (depreciation of capital costs and related service contract expense) were previously included in the operating costs of the Systems and Operations department, which were then allocated out to user departments via the allocations of costs from this department that was based on pools of costs associated with the various user departments. When the method of distributing the costs of the Systems and Operations department was simplified in 2009 (most costs of this department are personnel-related, and there is no efficient and objective method to allocate these costs to the various cost pools established), the costs associated with single departments were removed from the Systems and Operations department and recorded directly in those user departments. Accordingly, the negative variance is related to the depreciation of and maintenance contracts on the Epicor financial software suite and the positive variance in allocated costs results primarily from the reduction in costs allocated from Systems and Operations.

Prepared April 2010

INFORMATION SERVICES DIVISION
Highlights of 2009 Activities
Thomas Blythe, Chief Information Officer

Summary
The Information Services Division consists of two departments, under the Chief Information Officer, Tom Blythe:

- Business and Publication Computing, Gerry Loon, Director
- Systems and Operations, Shannon Reall, Manager

In addition to the normal functions performed to maintain the hardware, software and network infrastructure of the Society, the Information Services Division worked on a number of important projects in 2009, including:

- implementation of the Personify association management system
- replacement of expensive, preprinted business forms with plain paper forms
- implementation and enhancement of EditFlow software for journal editorial boards
- design and development of a new website for the AMS
- installation of a virtual server environment
- replacement of aging departmental printers with multipurpose printers
- improvement of PCI DSS Compliance

Implementation of Personify
In January 2009, the Board of Trustees approved the capital request for the purchase and implementation of the Personify association management software from TMA Resources (TMAR). AMS staff has been working with TMAR to analyze the Society's needs, configure the software for the Society, and analyze the modifications required for Personify to meet our needs. A detailed report on this project can be found in Item 3.7.

Replacement of preprinted business forms
Since 1991 when our current order processing system was installed, the AMS has produced business forms on preprinted, continuous-paper forms printed on a line printer. These forms included invoices, pro forma invoices and packing slips. This year these expensive forms were replaced with more modern looking forms printed on plain paper. As result of this change, the business forms are created as PDF files that can be sent in email to our customers.

Implementation and enhancement of EditFlow software
All primary journal editorial boards are now using EditFlow to support the peer review process for our journals. AMS staff worked with Mathematical Sciences Publishers to tailor the software to meet the Society's needs.

Design and development of a new website for the AMS
The goal of the website reorganization project is to make it easier for people to navigate the AMS website and find the information for which they are looking. In order to achieve this goal, the infrastructure and design of the AMS website had to fundamentally change. In 2009, we analyzed our existing site and create a new design and architecture for the site. The new site was launched in April of 2010 and is a vast

improvement over our previous website both visually and technically. A detailed report on this project can be found in Item 3.8.

Installation of a virtual server environment

Staff have installed a new virtual environment using four HP servers, VMware software, and an EMC Storage Array. In 2009, we moved 15 physical servers into the virtual environment. In addition, eight new Windows servers were built as virtual machines to support the Personify implementation and three new UNIX servers were built as virtual machines to separate some services from our web server for increased security. We anticipate the migration of an additional ten physical servers to virtual servers in 2010. The reduction in the number of physical servers in our computer room should result in savings in power for running and cooling the servers.

Replacement of aging departmental printers with multipurpose printers

After completing an assessment of our current printer costs, including an analysis of support and supplies for the past three years, staff met with several vendors to discuss replacing a number of our existing printers with fewer, multi-function printers. Prices were negotiated for five years of support, including maintenance and supplies. It is expected that the Society will realize significant savings in the total cost of printers over the five-year period.

Improvement of PCI DSS Compliance

The Payment Card Industries Data Security Standard (PCI DSS) is a set of comprehensive requirements for the security of credit card data. Until 2009, enforcement of compliance to the PCI DSS was relatively loose for our organization. The Society only needed to complete a self-questionnaire. In mid-2009 First Data Corporation, our credit card processor, contacted the Society informing us that we were required to pass a quarterly scan of our web server and answer an online questionnaire. Software on the web server was patched for security fixes and we passed the scan. Our systems are scanned quarterly and we have consistently passed the scans. Staff will continue to work on PCI DSS compliance and expect the implementation of Personify to address a number of existing issues.

Prepared April 16, 2010

MATHEMATICAL REVIEWS DIVISION
Summary of 2009 Activities
Graeme Fairweather, Executive Editor

In 2009, the Mathematical Reviews Database (MRDB) increased by 108,913 bibliographic items and added 69,005 reviews. The following table offers a comparison of the number of items and the number of reviews added to the MRDB in the calendar year 2009 with the corresponding data for 2008. Note that the Digital Mathematics Library (DML) items are computer generated using bibliographic metadata harvested from digitization sites or supplied by publishers. Since there were no such items added in 2009, the increase in regular items reflects a larger daily box size as well as an extra effort to reduce the backlog of collections. The number of reviews added represents an all-time high.

	2009	2008
Items added to the MRDB	108,913	114,689
Regular items	108,913	98,410
DML items	0	16,279
Reviews added to the MRDB	69,005	63,691

The volume of the mathematics literature continues to grow. In 2009, MR became more cautious about adding journals, opting to delay approval of new journals until they have published a few issues. In 2009, MR added 38 new journal titles including 14 high density journals and 4 database expansion journals.

Three MathSciNet enhancements were released in 2009. A new search feature now allows MathSciNet users to find the top cited books and top cited journal articles by subject classification and by publication year. At the request of librarians, subscriber names are now presented in the upper right-hand corner of each search page. Finally, as part of the BibTex information, MathSciNet now presents DOIs for approximately one million electronic publications.

The processing of journals at MR continues to be affected by the growing number of journals that are processed from online versions. Currently, 717 journals are being downloaded, which is up from 567 journals that were being downloaded one year ago. In addition to journals, we now have 10 series being downloaded. Several large publishers are delivering their material to MR electronically and have given permission to send items electronically for review. The ability to send PDFs to reviewers is a time and paper saver, but the effort involved in acquiring these items, indexing them and reviewing them continues to be slowed by having more journals delivered electronically. Better electronic tools help. In 2009, a new editor prescan tool was put into place which allows editors to indicate classifications and treatment online. A routing mechanism was later added, thereby eliminating some bookkeeping tasks and making it possible to route journals between editors. The review edit program was developed as a review input program for the production staff, and the download manager was trained to automatically print reference lists and to limit the printing of items being sent electronically. Automatically printing reference lists translates into having these available on MathSciNet almost three months earlier than before.

The most visible physical changes at MR during 2009 were the completion of a second cubicle installation and the dramatic clean-ups of the fourth floor and an editor's office.

Prepared April 2010

MEETINGS AND PROFESSIONAL SERVICES DIVISION
Highlights of 2009 Activities
Ellen J. Maycock, Associate Executive Director

The mission of the Division of Meetings and Professional Services is to provide professional meetings, programs, services and public awareness materials that support the continuing professional development of the membership, both individuals and institutions, and the mathematical community at large. A central theme of all the activities within this division is outreach not only to members of the profession but also to a general audience. In addition to working on many ongoing projects, staff members began to develop several new programs to support the mission of the division in 2009.

The **Meetings and Professional Services Division** functions primarily to support the three departments contained within it. However, the AED and her assistant also do a number of things independently. The AED and her assistant are the staff support for two policy committees and administer the Book and Journal Donation Program. The second summer conferences of the Mathematics Research Communities program, funded by the National Science Foundation, were held in Snowbird, Utah, in the summer of 2009. Preparations for these 2009 conferences, as well as planning for the 2010 summer conferences and the MRC participation in the 2010 JMM occupied the AED and her assistant during 2009. They also provided staff support for Professor Alan Tucker of SUNY Stony Brook, who is the PI on an NSF grant to study the effectiveness of online grading systems. This study is an outcome of former President James Glimm's Task Force on the First Year College Mathematics Experience.

The **Membership and Programs Department** continues to run a large number of programs for our members and for the larger mathematics community. The department designs and implements promotional efforts to our current, new and lapsed members. The Membership and Programs Department saw a great deal of change in 2009, including the launching of several new automated systems. In summer 2009, EIMS and Employment Center forms were combined in new software from Boxwood Technology and the first fully electronic Employment Center was held in January, 2010. MathPrograms.org, a clone of Mathjobs.org, was introduced to the community and a number of AMS programs conducted their application processes through the MathProgram.org website in late 2009. Membership levels were not severely impacted by the current economy but will need to be carefully watched.

During the Trustee Liaison phone call of April 8, 2010, Trustees Carol Wood and Ron Stern asked about the user support that the department provides for Mathjobs.org, and speculated about the additional time commitment by staff if we were to expand the online application service to include other departments, such as statistics or computer science. The following chart shows that after 2005, when the department overhauled all the documentation for Mathjobs.org, the hours per employer have been relatively stable, with a slight increase for 2009 due to training staff for increased responsibilities.

Staff hours for Mathjobs.org

	staff hours	number of employer accounts	hours per employer
2005	568	52	10.9
2006	380	113	3.4
2007	550	160	3.4
2008	623	201	3.1
2009	726	209	3.5

The **Meetings and Conferences Department** continued with its ongoing support for the recurring meetings and conferences of the AMS. The Joint Mathematics Meetings, held in Washington, DC, in 2009, was extremely successful with an attendance of 5845. The department worked on the 2010 San Francisco meeting during most of 2009. The department provided support for the Mathematics Research Conferences program held in Snowbird, UT. There were four sectionals held in the spring of 2009 and four in the fall of 2009. The department underwent some staffing changes during the early half of 2009. The Service Coordinator, Judith Mosteiro, retired in April. Her position was merged into the Registration/Housing/Exhibits Coordinator position held by Christine Davis. Both Christine and Kimberly Albanese, who were hired in 2008, are still learning aspects of their jobs but the department continues to function well.

The **Public Awareness Office** maintained and expanded its activities to promote the Society and its programs and to promote mathematics. Notable or new activities in 2009: major revision of the brochure for High School students and a large mailing to high school math teachers in the U.S.; greatly increased exposure of AMS posters; many more podcasts and translated Mathematical Moments, plus five printed in large poster format; videotapes taken and posted of *Who Wants to Be a Mathematician* games and plans for the first national game (held at JMM 2010); the addition of the JMM Mathematical Art Exhibition works in an album on Mathematical Imagery; role in the Web Advisory Group regarding the reorganization of the AMS website; and handling some jobs for Allyn Jackson (Math Digest and work related to news for *Notices* and press releases) while she was out on leave.

The Meetings and Professional Services Division deals with activities and programs that lie at the heart of the AMS–activities and programs that directly affect all mathematicians, both members and nonmembers. So it is essential for each department in the division to be attuned to issues that are important for the mathematical community. During this difficult economic time, mathematicians and mathematics departments are turning to the Society for increased programs and services. There are a number of new projects being discussed at various levels of the Society. Many of these projects would be handled by staff in the Division of Meetings and Professional Services. In the Trustee Liaison discussion, the three of us acknowledged the need to prioritize activities, and to consider which activities might be curtailed in order to accommodate new projects in the Division.

Prepared April 12, 2010

PUBLISHING DIVISION
Highlights of 2009 Activities
Beth Huber, Associate Executive Director

Beth Huber met via conference call with Publishing Division trustee liaisons Mark Green and Ron Stern on April 1, 2010 to review the 2009 division performance. The following summarizes this discussion.

DEPARTMENTAL ACTIVITIES:

Production Department

- In collaboration with the Publications Technical Group, a new electronic distribution process for author off-prints was established to replace the traditional paper off-print. This new process provides authors with permanent access via the AMS website to a PDF version of all articles published beginning in 2010. It also speeds up the delivery of the offprint to authors and reduces our carbon footprint.
- The *Memoirs* production workflow was expanded to provide electronic access to the journal in addition to paper. To introduce the new product to subscribers the last volume of the *Memoirs i*n 2009 was made freely available. The first subscription year for *eMemoirs* is 2010.
- Work began in 2009 to digitize the *Journal of the AMS*, *Transactions of the AMS, Proceedings of the AMS* and *Mathematics of Computation* back to Volume 1, Issue 1 of each publication. This effort, funded by a benefactor of the Society will be completed in April of 2010 and will be freely available online.

Printing Department

- A used 4-color perfecting press was purchased and installed in our printing facility in the fall. The new press was purchased at below market costs through an intermediary from a financial institution that obtained the press through a bankruptcy proceeding. This purchase not only replaced our oldest Miller Press that was 33 years old, but also provides us with the ability to reduce outside expenditures on color printing.

Sales Administration

- The new Indian Editions program was launched in the first quarter of 2009. Under this program, selected books in our backlist are manufactured and distributed in India through an exclusive distribution agreement with Universities Press. These soft cover editions are specially priced for the Indian market. In 2009, sales of these editions covered all of the manufacturing costs and we are projecting that when all the stock in the first release is sold we will have a gross profit of $60,240.
- We signed a contract with a Serials Solutions – Summon Unified Discovery Service to provide journals metadata in an effort to give our journals a little more exposure in academic libraries.
- Approximately 90 % of our MathSciNet subscriptions are organized in consortia. The Sales Administration group is responsible for managing all of our consortia relationships.

Member and Customer Services ("Macs")

- More attention was focused on the behaviors and buying patterns of our customers during the uncertain economic times we are facing. More effort is being expended in reaching out to lapsed journal subscribers in an attempt to regain subscriptions. Our book buying customers on both the individual and commercial side are also demanding more attention as financial issues strain their ability to conduct "normal" activity with us.
- We are in the midst of a multi-year migration to new association management software. This effort is being led by our Information Services Division. Since the project includes replacement of our order processing system, MACS staff is actively involved in the project.

Distribution

- After conducting a careful review of inventory levels on some of our older journal and book inventories we were able to significantly reduce stock levels based on future sales forecasts.

PRODUCT LINE REVENUE:

Journals - Journal subscription revenue was relatively flat in 2009 vs. the prior year even with the 5% increase in prices over 2008. This is attributed to a small loss of subscriptions and the continued migration from paper to electronic subscriptions which bring in 10% less revenue than paper subscriptions.

Books - Book revenue was also flat to 2008 revenue. A significant change is the contribution of our newest series, AMS Pure and Applied Undergraduate Texts (AMSTEXT). After acquiring the *Sally Series* from Brooks Cole in the fall of 2008 we re-launched the series by recovering the acquired inventory with a new series cover, logo and design. Sales of AMSTEXT accounted for 6% of book revenue in 2009 and we have recouped our investment. The first addition to this series will be published in 2010.

Prepared April 19, 2010

WASHINGTON DIVISION
Highlights of 2009 Activities
Samuel M. Rankin, Associate Executive Director

Recovery and Reinvestment Act (ARRA) provided $21.5 billion for science research and infrastructure. The NSF spent $2.4 billion from ARRA in FY 2009, bringing the Agency's total FY 2009 budget to $8.9 billion. The Division of Mathematical Sciences (DMS) received $97.34 million additional funds from ARRA giving DMS a total FY 2009 budget of $322.18 million. The AMS Washington Office follows the annual appropriations process closely and uses a variety of means to affect the federal science budget process. Activities include facilitating grassroots efforts by AMS members and collaborative efforts with other societies, organizations, and coalitions.

During the FY 2009 Joint Meetings held in Washington, the DC office was involved in several activities. These included CSP and COE sponsored presentations, organizing the Annual Department Chairs Workshop, a Congressional Fellows presentation and discussion, organizing a session on non-academic employment, and organizing congressional office visits on Capitol Hill.

Forty-one department chairs representing undergraduate, masters, and doctorate departments attended the Department Chairs Workshop. The Workshop leaders were Guillermo Ferreyra, Dean of Arts and Sciences, Louisiana State University; Larry Gray, former head and director of undergraduate studies, School of Mathematics, University of Minnesota; and Stephen Robinson, chair, Department of Mathematics, Wake Forest University.

The non-academic employment session involved identifying and inviting mathematicians working in business and government to lead an information session on non-academic employment. Christina Bahl, National Security Agency, William Browning, Applied Mathematics Inc., Douglas Costa, Susquehanna International Group,Eli Donkar, Social Security Administration, Rebecca Wasyk, Metron Scientific Solutions, and David Weinreich, Professional Staff, U.S. Congress, participated in the session.

Seventeen congressional office visits were organized for twelve Joint Meetings attendees. The Washington Office scheduled the visits and developed talking points and materials to leave with the visited offices.

Sam Rankin was asked by the House Commerce, Justice, Science and Related Agencies Appropriations (CJS) Subcommittee to provide testimony on NSF to the Subcommittee on March 3, 2009, at a hearing titled "The Place of NASA and the National Science Foundation in the Overall Science Enterprise." Besides presenting testimony, Rankin was asked to be prepared to answer a series of questions about NSF funding and its relationship to other federal science funding agencies.

On April 2, AMS immediate past president, Jim Glimm, gave public testimony in support of NSF to the House CJS Subcommittee. His testimony was part of collaborative testimony given by the American Chemical Society, AMS, the American Physical Society, and the Federation of American Societies for Experimental Biology. Representatives from each of these societies gave testimony in support of NSF. Sam Rankin worked with Washington representatives of the other societies to set up this collaboration and prepared the testimony given by Jim Glimm. The CJS Subcommittee seemed to take well the underlying message of the four societies: the $9.49 billion for NSF in FY 2009 is great, however if there are not sufficient budget increases for NSF year-over-year, everything gained from the Recovery Act and the FY 2009 Omnibus Appropriations will be lost.

The Washington Office continues to provide leadership for the Coalition for National Science Funding (CNSF), with Sam Rankin serving as chair and organizer of the monthly CNSF meetings and Anita Benjamin serving as director of the Annual CNSF Capitol Hill Exhibition and as treasurer of the Coalition. CNSF now has over 120 member organizations. The 2009 Exhibition drew over 285 attendees including six Members of Congress. The AMS sponsored the exhibit of Professor David Hiebeler of the University of Maine. Hiebeler's exhibit was titled *Modeling Outbreaks in Agricultural Systems, Human Communities and Computer Networks.* Speaker Nancy Pelosi attended the event as did chair of the House Committee on Science and Technology, Bart Gordon. Nancy Pelosi gave a short speech on the value of federally supported science research. CNSF chair Sam Rankin introduced Bart Gordon who introduced Nancy Pelosi. An article on page 24 of the April 3, 2009 issue of *Science Magazine* mentions Speaker Pelosi's visit to the CNSF Exhibition and includes a picture of the Speaker, Representatives Bart Gordon and Rush Holt, NSF director Arden Bement, and Sam Rankin.

Besides CNSF, the Washington Office continues to be active working with other coalitions advocating for science research and education, including the Task Force for the Future of American Innovation. The director of the DC office participates in weekly Task Force meetings as well as associated activities. Task Force member organizations include Intel, IBM, Tech America, Northrop Grumman, the American Chemical Society, and the American Physical Society to name a few. The DC director also attends monthly meetings of the Council of Graduate Schools where aspects and issues of graduate education are discussed.

The Commission on Professionals in Science and Technology has invited Sam Rankin to participate in an NSF supported project: "Women in International Chemistry, Computer Science, and Mathematics and Statistics." An outcome of this project will be a book-length manuscript containing data and narratives measuring advancement of women in science. The manuscript will include a chapter on mathematics and statistics. Sam participated in a two-day workshop in September 2009 to kick off the project. He will be working with Keith Crank of the American Statistical Association and Diane Wilcox of the University of Witwatersrand, Johannesburg, South Africa to put together the chapter on mathematics and statistics.

Katherine Crowley was selected the AMS 2009-2010 Congressional Fellow, the Society's fifth Fellow. Katherine is an assistant professor of mathematics at Washington and Lee University. Her fellowship term is from September 1, 2009 through August 31, 2010. Katherine is serving her Fellowship in Senator Al Franken's office. Jim Rath, the 2008-2009 AMS Congressional Fellow returned to Austin, Texas where he does computational consulting. Former Fellows David Weinreich and Jeffry Phan remain on the Hill, with David serving as Legislative Director for Representative Bob Etheridge (D-NC) and Jeffry as Counsel for Senator Jeff Bingaman (D-NM).

Baldur Hedinsson, a graduate student at Boston University, completed his ten-week AMS-AAAS Mass Media Fellowship at the Milwaukee Journal Sentinel in August, 2009. Several of Baldur's articles were published in the Sentinel during his fellowship period. Baldur's experience has motivated him to consider science writing for the general population as part of his professional career.

On October 28, 2009, Stuart Geman of Brown University presented the annual AMS Congressional Luncheon Briefing. His talk was titled "The Movies, The Markets, and Mathematics." AMS Executive Director, Don McClure, served as Master of Ceremonies for the event. Geman gave an interesting and well-received presentation.

Speaker Nancy Pelosi was chosen by the AMS Public Policy Award Selection Committee (George Andrews, Jim Glimm, and Ron Stern) to be the first recipient of the Award. The Award is a sculpture designed and created by mathematician Helaman Ferguson. Sam Rankin made a request to present the Award to the Speaker at the JMM in San Francisco, her congressional district. This request was turned down. The DC Office will try to set up a date for a reception in Washington in 2010.

Sam Rankin, once again, prepared a chapter ―Mathematical Sciences in the FY 2010 Budget" for the *AAAS Report XXXIV: Research and Development FY 2010 (http://www.aaas.org/spp/rd/rdreport2010/).* This *Report* outlines federal funding for science research based on the FY 2010 Budget Request. It includes agency and discipline information. A version of the chapter also appeared in the November, 2009 issue of the *NOTICES.*

Sam Rankin served for the second year on the AAAS Energy, Environment, Agriculture and Natural Resources Science Policy Fellowship Selection Committee. This activity included reviewing applications and spending two days interviewing candidates. Rankin also participated on the AAAS Mass Media Selection Committee, helping to choose candidates for the 2009 fellowship experience in mass media outlets.

The Washington Office remains committed to building an active grassroots network. Network members were encouraged to communicate with district and state offices during the August 2009 congressional recess. The grassroots Web Page (http://www.ams.org/policy/government/advocacy/grassroots) was updated to facilitate these communications. At various times during the year the DC Office sends out alerts asking network members to communicate with their Members of Congress.

Prepared April 23, 2010

AMERICAN MATHEMATICAL SOCIETY

Financial Statements

December 31, 2009 and 2008

(With Independent Auditors' Report Thereon)

KPMG LLP
6th Floor, Suite A
100 Westminster Street
Providence, RI 02903-2321

Independent Auditors' Report

The Board of Trustees
American Mathematical Society:

We have audited the accompanying balance sheets of the American Mathematical Society (the Society) as of December 31, 2009 and 2008, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the Society's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Society's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Society as of December 31, 2009 and 2008, and the changes in its net assets and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

As described in note 7 to the financial statements, the Society adopted certain provisions of Financial Accounting Standards Board Accounting Standards Codification (ASC) Subtopic 958-205, *Not-for-Profit Entities – Presentation of Financial Statements*, in 2008.

KPMG LLP

September 1, 2010

AMERICAN MATHEMATICAL SOCIETY

Balance Sheets

December 31, 2009 and 2008

Assets		2009	2008
Cash and cash equivalents (note 3)	$	474,913	1,263,610
Short-term investments (notes 2 and 4)		14,145,500	16,007,397
Accounts receivable, net of allowances of $348,000 and $260,000 in 2009 and 2008, respectively		744,115	1,023,032
Deferred prepublication costs		649,414	568,308
Completed books		1,408,873	1,271,938
Prepaid expenses and deposits		1,464,754	1,612,107
Land, buildings and equipment, net (note 5)		5,093,183	4,532,533
Long-term investments (notes 2, 6, and 7)		69,094,463	52,202,690
Total assets	$	93,075,215	78,481,615
Liabilities and Net Assets			
Liabilities:			
Accounts payable and accrued expenses	$	2,307,216	2,902,068
Severance and study leave pay (note 8)		997,038	972,311
Deferred revenue		11,279,588	12,243,494
Postretirement benefit obligation (note 9)		4,543,155	4,344,865
Total liabilities		19,126,997	20,462,738
Net assets:			
Unrestricted:			
Undesignated		4,305,781	5,402,026
Designated (notes 6, 7, and 10)		59,543,414	43,969,791
		63,849,195	49,371,817
Temporarily restricted (notes 6, 7, and 11)		5,346,374	4,054,666
Permanently restricted (notes 6, 7, and 12)		4,752,649	4,592,394
Total net assets		73,948,218	58,018,877
Total liabilities and net assets	$	93,075,215	78,481,615

See accompanying notes to financial statements.

AMERICAN MATHEMATICAL SOCIETY

Statements of Activities

Years ended December 31, 2009 and 2008

	2009	2008
Changes in unrestricted net assets:		
Operating revenue, including net assets released from restrictions (notes 1, 6, 7, and 11):		
Mathematical Reviews	$ 10,485,695	10,230,303
Journals	4,740,486	4,707,481
Books	3,568,473	3,616,900
Other publications-related revenue	470,728	496,852
Dues, services, and outreach	3,902,037	3,774,473
Grants, prizes and awards	838,029	657,044
Investment earnings available for spending (notes 6 and 7)	1,429,500	1,039,300
Meetings	990,503	994,808
Short-term investment income (loss)	983,777	(105,508)
Other	78,146	147,466
Total operating revenue	27,487,374	25,559,119
Operating expenses:		
Mathematical Reviews	6,744,036	6,569,183
Journals	1,719,214	1,494,622
Books	3,477,316	3,654,760
Publications, indirect	934,624	1,181,931
Customer services, warehousing and distribution	1,362,366	1,471,565
Other publications-related expense	186,673	183,838
Membership, services and outreach	3,773,845	3,697,839
Grants, prizes and awards	971,076	788,439
Meetings	922,803	1,031,926
Governance	416,424	453,805
Member and professional services, indirect	575,833	618,817
General and administrative	3,576,026	3,435,357
Other	57,389	217,601
Total operating expenses	24,717,625	24,799,683
Excess of operating revenue over operating expenses	2,769,749	759,436
Investment income in excess of (less than) investment earnings available for spending (note 6)	11,774,829	(20,332,683)
Postretirement benefit-related changes other than net periodic cost (note 9)	(67,200)	(142,934)
Adjustment required under the District of Columbia's enacted version of the Uniform Prudent Management of Institutional Funds Act and the provisions of FASB ASC Subtopic 958-205 (note 7)	—	(5,064,967)
Change in unrestricted net assets	14,477,378	(24,781,148)

(Continued)

AMERICAN MATHEMATICAL SOCIETY

Statements of Activities

Years ended December 31, 2009 and 2008

		2009	2008
Changes in temporarily restricted net assets:			
Contributions	$	195,470	178,340
Investment income (loss) (note 6)		1,680,174	(2,540,675)
Net assets released from restrictions (notes 1(e) and 11)		(583,936)	(556,807)
Adjustment required under the District of Columbia's enacted version of the Uniform Prudent Management of Institutional Funds Act and the provisions of FASB ASC Subtopic 958-205 (note 7)		—	5,064,967
Change in temporarily restricted net assets		1,291,708	2,145,825
Change in permanently restricted net assets:			
Contributions		160,255	757,155
Change in permanently restricted net assets		160,255	757,155
Change in net assets		15,929,341	(21,878,168)
Net assets, beginning of year		58,018,877	79,897,045
Net assets, end of year	$	73,948,218	58,018,877

See accompanying notes to financial statements.

AMERICAN MATHEMATICAL SOCIETY

Statements of Cash Flows

Years ended December 31, 2009 and 2008

	2009	2008
Cash flows from operating activities:		
Change in net assets	$ 15,929,341	(21,878,168)
Adjustments to reconcile change in net assets to net cash and cash equivalents provided by operating activities:		
Depreciation	559,970	519,748
Net realized and unrealized (gains) losses on long-term investments	(12,945,220)	24,341,301
Contributions restricted for permanent investment	(160,255)	(757,155)
Changes in assets and liabilities:		
Accounts receivable, net	278,917	(205,131)
Deferred prepublication costs	(81,106)	40,415
Completed books	(136,935)	(118,878)
Prepaid expenses and deposits	147,353	(288,677)
Accounts payable and accrued expenses	(570,125)	46,705
Deferred revenue	(963,906)	499,125
Postretirement benefit obligation	198,290	265,538
Net cash and cash equivalents provided by operating activities	2,256,324	2,464,823
Cash flows from investing activities:		
Change in short-term investments	1,861,897	380,319
Purchases of property and equipment	(1,120,620)	(781,329)
Sales of long-term investments	5,702,073	3,568,644
Purchases of long-term investments	(9,648,626)	(6,047,427)
Net cash and cash equivalents used in investing activities	(3,205,276)	(2,879,793)
Cash flows from financing activities:		
Contributions restricted for permanent investment	160,255	757,155
Net cash and cash equivalents provided by financing activities	160,255	757,155
Net (decrease) increase in cash and cash equivalents	(788,697)	342,185
Cash and cash equivalents at beginning of year	1,263,610	921,425
Cash and cash equivalents at end of year	$ 474,913	1,263,610

See accompanying notes to financial statements.

AMERICAN MATHEMATICAL SOCIETY

Notes to Financial Statements

December 31, 2009 and 2008

(1) Description of Business and Summary of Significant Accounting Policies

(a) Description of Organization

The American Mathematical Society (the Society) was created in 1888 to further mathematical research and scholarship. It is an international membership organization, currently with over 30,000 members. The Society fulfills its mission with publications and professional programs that promote mathematical research, increase the awareness of the value of mathematical research to society and foster excellence in mathematics education.

(b) Basis of Financial Statement Presentation

The accompanying financial statements are presented on the accrual basis of accounting in accordance with U.S. generally accepted accounting principles (GAAP) and have been prepared to focus on the Society as a whole and to present balances and transactions according to the existence or absence of donor-imposed restrictions.

The preparation of the financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosures of contingent assets and liabilities, as of the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

The Society defines operating income as the net increase in unrestricted net assets derived from the activities related to the accomplishment of its mission, such as publications, programs, meetings and conferences, and member services. Investment earnings appropriated by the Board of Trustees on unrestricted long-term investments are presented as an operating revenue. Any excess investment earnings (losses) are presented as a nonoperating item.

(c) Classifications of Net Assets

The Society's net assets and activities that increase or decrease net assets are classified as unrestricted, temporarily restricted, or permanently restricted.

Effective January 1, 2008, the Society adopted certain provisions of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Subtopic 958-205, *Not-for-Profit Entities – Presentation of Financial Statements*. ASC paragraph 958-205-50-1B provides guidance on the net asset classification of donor-restricted endowment funds for a not-for-profit organization that is subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act and also requires disclosures about endowment funds, including donor-restricted endowment funds and board-designated endowment funds.

The Society is incorporated under the laws of the District of Columbia and is therefore subject to its corporate governance laws. In late 2007 the Council of the District of Columbia adopted its version of the Uniform Prudent Management of Institutional Funds Act (DCUPMIFA), effective for the year ended December 31, 2008. As a result of this new law and related accounting guidance, the Society has classified its net assets as follows in 2009 and 2008:

- Permanently restricted net assets are those which must be permanently invested to provide a source of support for the activities of the Society and which are commonly referred to as endowments. Permanently restricted net assets consist of (1) the original value of gifts donated to the permanent endowment; (2) the original value of any subsequent gifts to the permanent endowment, and (3) if required, accumulations to the permanent endowment made in accordance with the terms of the applicable donor gift instrument at the time the accumulation is added to the fund.
- Temporarily restricted net assets include (1) those whose use is restricted by donor-imposed limitations which will lapse upon the passage of time, use of the asset for its intended purpose, or the meeting of other donor-imposed stipulations, and (2) any remaining portion of a true endowment fund that is not classified as permanently restricted net assets. This remaining portion of true endowment funds, if any, shall remain in temporarily restricted net assets until appropriated for expenditure by the Board in accordance with the standard of prudence prescribed by DCUPMIFA.
- Unrestricted net assets are those without any donor-imposed or other restrictions as to their use and which are available for the general operations of the Society.

Prior to 2008, the Society operated under the Uniform Management of Institutional Funds Act as enacted by the District of Columbia. Under this law, the accumulated realized and unrealized gains related to the investment of an endowment gift could be legally appropriated for expenditure by the governing body of an organization unless the applicable gift instrument indicates the donor's intention that such gains may not be expended. None of the Society's endowment gift instruments executed by donors contains such a restriction. The net gains on endowment gifts that contained donor restrictions as to the use of income were recorded in temporarily restricted net assets in 2007. The net gains on endowment gifts that contained no donor restrictions as to the use of income derived therefrom were included in unrestricted net assets in 2007. This necessitated a reclassification adjustment at the beginning of 2008 to adopt the provisions of the new law and related accounting guidance.

The original amount of endowment gifts has been included in permanently restricted net assets in 2009 and 2008, as none of the gifts require subsequent accumulations.

(d) Contributions and Net Assets Released from Restrictions

The Society records as contribution revenue unconditional promises to give. All other contribution revenue is recorded as received. If the contribution is made in assets other than cash, the amount of the contribution is measured at the fair value of the asset contributed at the date the contribution or unconditional promise to give is made by the donor.

Contributions of cash and other assets are reported as temporarily restricted support if they are received with donor stipulations that limit the use of the donated asset for some specific purpose or time period and as permanently restricted support if the donated asset must be invested in perpetuity.

When a donor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, temporarily restricted net assets are reclassified to unrestricted net assets and reported in the accompanying statements of activities as net assets released from restrictions.

If a donor-imposed restriction is met for the full amount of the contribution within the year, the related revenues and expenses are recorded solely in the unrestricted net assets category in the accompanying statements of activities.

The Society receives contributed services from its members, principally as volunteer leaders in the governance structure of the Society and as volunteer members of editorial committees for the Society's various publications. The latter category of contributed services qualifies for recognition as income and expense under GAAP, as the members of the editorial committees must possess specialized skills. However, the Society has no practical way of measuring the fair value of the services received from its volunteer editorial committee members, and accordingly, no such estimate is included as revenue or expense in the accompanying financial statements.

(e) Investments

Substantially all of the Society's investments, both short term and long term, are carried at fair value, as determined by quoted market prices. Investments in mutual funds are carried at the quoted net asset value of the fund, which approximates fair value. Certain investments, such as money market funds and certificates of deposit, are carried at cost, which approximates fair value.

Under DCUPMIFA, the total return (interest, dividends, and realized and unrealized gains or losses) derived from all donor-restricted endowment fund investments is recorded as investment return (loss) in temporarily restricted net assets. As the purpose restriction is met, the income derived from true endowment funds whose use of income is restricted is reclassified from temporarily restricted net assets to unrestricted net assets as net assets released from restrictions. This totaled $332,638 and $259,329 in 2009 and 2008, respectively.

As expenditures are incurred that meet the criteria established by the Board of Trustees for use of the income derived from true endowment funds whose use of income is not restricted, the income is reclassified from temporarily restricted net assets to unrestricted net assets as net assets released from restrictions. This totaled $251,298 and $297,478 in 2009 and 2008, respectively.

The Board also appropriates funds to support the Society's mission-driven activities. The total so appropriated from Board-designated funds and included in operating revenue as earnings available for spending was $1,429,500 in 2009 and $1,039,300 in 2008. Earnings related to the Operations Support Fund totaled $1,399,500 and $1,039,300 in 2009 and 2008, respectively, and earnings related to the Young Scholars Fund totaled $30,000 in 2009.

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(f) Deferred Prepublication Costs

Prepublication costs, consisting of translation, editorial, composition and proofreading costs, are deferred until publication. Upon publication, prepublication costs related to books are transferred into completed books inventory and prepublication costs related to journals are expensed to offset subscription revenue for the journals.

(g) Completed Books

Publication costs of books, consisting of paper, printing, and prepublication costs, are deferred and charged to expense as the books are sold. Completed books are recorded in the accompanying balance sheets at the lower of average cost or market.

(h) Land, Buildings, Equipment, and Accumulated Depreciation

Land, buildings, and equipment are recorded at cost less accumulated depreciation. Depreciation is provided over the estimated useful lives of the assets using straight-line or accelerated methods.

Asset Classifications	Estimated useful life
Land and imrpovements	10-20 years
Building and improvements	10-35 years
Furniture, equipment, and software	3-10 years
Transportation equipment	3-15 years

Depreciation expense was $559,970 and $519,748 for the years ended December 31, 2009 and 2008, respectively.

(i) Membership Journals

Members are provided certain journals at no charge as these journals are considered to be benefits of membership in the Society.

(j) Revenue Recognition

Advance collections for dues, subscriptions, and publications are deferred and generally recognized as income when the services are rendered or the publications shipped. For subscriptions to current year journals for which all of the issues have not yet been published but for which substantially all of the costs have been incurred, the Society accrues estimated completion costs and recognizes the related revenues. For sales of books and journals, revenue is recognized upon shipment. In addition, the Society reserves for its estimate of book returns.

(k) Income Taxes

The Society is a tax-exempt organization as described in Section 501(c)(3) of the Internal Revenue Code (the Code) and is generally exempt from income taxes pursuant to Section 501(a) of the Code. Rules and regulations regarding unrelated business income tax apply to the Society, but no activities resulting in a material amount of taxes due occurred in 2009 or 2008.

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The Society adopted certain provisions of FASB ASC Topic 740, *Income Taxes* as of January 1, 2009. ASC 740 requires a company to recognize the tax benefits of uncertain tax positions only when the position is "more likely than not" to be sustained assuming examination by the revenue authorities. The tax benefit recognized is the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement. The effect of adoption did not have a material impact on the financial statements as of and for the year ended December 31, 2009.

(l) Grant Income

The Society receives various grants that are subject to audit by the grantors or their representatives. Such audits could result in requests for reimbursement for expenditures disallowed under the terms of the grant; however, management believes that these disallowances, if any, would be immaterial.

(m) Reclassifications

Certain 2008 amounts have been reclassified to conform to the 2009 presentation.

(2) Fair Value Measurements

The Society adopted FASB ASC Topic 820, *Fair Value Measurements and Disclosures* on January 1, 2008 for fair value measurements of financial assets and financial liabilities and for fair value measurements of nonfinancial items that are recognized or disclosed at fair value in the financial statements on a recurring basis. The adoption of this standard did not have a material effect on the Society's operations or cash flows. ASC 820 establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the Society has the ability to access at the measurement date.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the asset or liability.

The level in the fair value hierarchy within which a fair value measurement in its entirety falls is based on the lowest level input that is significant to the fair value measurement in its entirety.

AMERICAN MATHEMATICAL SOCIETY

Notes to Financial Statements

December 31, 2009 and 2008

The following table presents assets that are measured at fair value on a recurring basis at December 31, 2009:

		Fair value measurements at reporting date using		
	December 31, 2009	**Quoted prices in active markets for identical assets (Level 1)**	**Significant other observable inputs (Level 2)**	**Significant unobservable inputs (Level 3)**
Assets:				
Investments:				
Short-term	$ 14,145,500	14,145,500	—	—
Long-term	69,094,463	69,094,463	—	—
Total	$ 83,239,963	83,239,963	—	—

Assets measured at fair value on a recurring basis at December 31, 2008 totaled $68,210,087, and all were measured using quoted prices in active markets for identical assets (Level 1). The financial statements as of and for each of the years ended December 31, 2009 and 2008 do not include any nonrecurring fair value measurements relating to assets or liabilities for which the Society has adopted the provisions of ASC 820.

(3) Cash and Cash Equivalents

Bank accounts, money market funds and petty cash comprise the entire cash and cash equivalents balance as of December 31, 2009 and 2008. The Society's bank accounts are federally insured to a maximum of $250,000 each.

(4) Short-Term Investments

Short-term investments, at fair value, consist of the following as of December 31:

	2009	**2008**
Certificates of deposit	$ 3,318,000	4,589,000
Fixed income mutual funds	4,615,188	4,179,521
U.S. government bonds, $500,000 face value, 5-year TIPS, 0.875%, due April 15, 2010	572,452	537,386
Convertible securities mutual fund	1,284,408	912,135
Domestic corporate stock	11,124	8,141
Money market mutual funds	4,344,328	5,781,214
	$ 14,145,500	16,007,397

On April 15, 2010, the TIPS account was redeemed for a total of $574,467 inclusive of $2,502 of interest.

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It is the Society's policy to invest no more than the federal insured limit of $250,000 in each financial institution's certificate of deposit. The income derived from these investments is unrestricted and is used to support operations.

(5) Land, Buildings, and Equipment

The following comprise the Society's investments in land, buildings, and equipment as of December 31:

	2009	2008
Land and improvements	$ 462,978	462,978
Building and improvements	7,220,017	7,157,450
Furniture, equipment and software	4,724,506	4,339,736
Transportation equipment	62,384	60,694
Software in progress	456,701	—
	12,926,586	12,020,858
Less accumulated depreciation	(7,833,403)	(7,488,325)
	$ 5,093,183	4,532,533

Progress payments for new Association Management Software to replace numerous in-house developed software applications comprise the software in progress at December 31, 2009. The Society accounts for costs incurred for software developed or obtained for internal use in accordance with FASB ASC Topic 350-40 *Internal Use Software*, including capitalizing costs incurred during the application development stage with amortization on a straight line basis beginning when the computer software is ready for its intended use.The software in progress is anticipated to begin amortization during fiscal 2010.

(6) Long-Term Investments

The Society's long-term investments are segregated into seven separate portfolios (including mutual funds), each with its own investment manager and investment objective. The overall investment strategy is determined by the Investment Committee of the Board of Trustees and is approved by the Board of Trustees annually. The primary investment objective of the long-term investment portfolio is an average real total return (net of investment fees and the effects of consumer inflation) of at least 6% over the long term. To achieve this result, the investment portfolio is allocated approximately 75% to equity investments and 25% to fixed income investments. The equity investments are further diversified into domestic, international, and real estate holdings. Additionally, the entire portfolio is diversified across economic sectors, geographic locations, industries, and size of investees.

(Continued)

AMERICAN MATHEMATICAL SOCIETY

Notes to Financial Statements

December 31, 2009 and 2008

The following comprise the Society's total long-term investment portfolio as of December 31:

	2009		2008	
	Fair value	**Cost**	**Fair value**	**Cost**
Cash and cash equivalents	$ 315,052	315,052	272,363	272,363
Domestic common stocks	4,482,258	4,033,573	3,443,310	4,195,563
Fixed income mutual funds	12,359,712	12,014,154	14,539,633	15,046,536
Equity mutual funds:				
Domestic common stocks	37,368,299	37,671,852	25,085,847	33,178,076
Domestic real estate investment trusts	3,702,802	3,500,904	2,351,853	3,021,247
International common stocks	10,866,340	11,898,690	6,509,684	10,027,126
Total	$ 69,094,463	69,434,225	52,202,690	65,740,911

The investment portfolio is allocated among the three categories of net assets as of December 31 as follows:

	2009	2008
Unrestricted net assets:		
Board-designated purposes (note 10)	$ 59,543,414	43,969,791
Total allocated to unrestricted net assets	59,543,414	43,969,791
Total allocated to temporarily restricted net assets	4,798,400	3,640,505
Permanently restricted net assets:		
Unrestricted use of income	1,565,181	1,565,181
Restricted use of income	3,187,468	3,027,213
Total allocated to permanently restricted net assets	4,752,649	4,592,394
Total long-term investments, at fair value	$ 69,094,463	52,202,690

(Continued)

The following schedule summarizes the investment return and its classification in the accompanying statements of activities for the years ended December 31:

	2009	2008
Dividends and interest, net of management fees of $29,953 and $34,909, respectively	$ 1,939,283	2,507,243
Net realized and unrealized gains (losses)	12,945,220	(24,341,301)
Investment income (loss)	14,884,503	(21,834,058)
Plus investment loss (less investment income) classified as temporarily restricted	(1,680,174)	2,540,675
Less investment earnings available for spending (notes 1(e) and 10):		
Spendable income from Operations Support Fund	(1,399,500)	(1,039,300)
Spendable income from Young Scholars Fund	(30,000)	—
Investment income in excess (loss below) investment earnings available for spending	$ 11,774,829	(20,332,683)

(7) Endowments

Effective January 1, 2008, the Society adopted certain provisions of FASB ASC Subtopic 958-205, *Not-for-Profit Entities – Presentation of Financial Statements*. ASC paragraph 958-205-50-1B provides guidance on the net asset classification of donor-restricted endowment funds for a not-for-profit organization that is subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act and also requires disclosures about endowment funds, both donor-restricted endowment funds and board-designated endowment funds.

The Society's endowment consists of approximately 30 individual funds established for a variety of purposes, including both donor-restricted endowment funds (true endowment) and funds designated by the Board of Trustees to function as endowments. Net assets associated with endowment funds, including funds designated by the Board of Trustees to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

(a) Interpretation of Relevant Law

The Board of Trustees of the Society has interpreted the version of the Uniform Prudent Management of Institutional Funds Act enacted by the Council of the District of Columbia (the Act) as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the Society classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund.

(Continued)

AMERICAN MATHEMATICAL SOCIETY

Notes to Financial Statements

December 31, 2009 and 2008

The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditure by the Society in a manner consistent with the standard of prudence prescribed by the Act. In accordance with the Act, the Society considers the following factors in making a determination to appropriate or accumulate donor-restricted endowment funds:

1. The duration and preservation of the fund
2. The purposes of the Society and the donor-restricted endowment fund
3. General economic conditions
4. The possible effect of inflation and deflation
5. The expected total return from income and the appreciation of investments
6. Other resources of the Society
7. The investment policies of the Society

Net assets comprising true endowment funds and funds designated by the Board of Trustees to function as endowments were as follows at December 31:

	Unrestricted	Temporarily restricted	Permanently restricted	Total
2009:				
Donor-restricted endowment funds	$ (70,137)	4,647,380	4,752,649	9,329,892
Board-designated endowment funds	59,543,414	—	—	59,543,414
Total endowment net assets	$ 59,473,277	4,647,380	4,752,649	68,873,306
2008:				
Donor-restricted endowment funds	$ (615,140)	3,472,017	4,592,394	7,449,271
Board-designated endowment funds	43,969,791	—	—	43,969,791
Total endowment net assets	$ 43,354,651	3,472,017	4,592,394	51,419,062

(Continued)

AMERICAN MATHEMATICAL SOCIETY

Notes to Financial Statements

December 31, 2009 and 2008

The following table summarizes the changes in endowment net assets for the year ended December 31, 2009:

	Unrestricted	Temporarily restricted	Permanently restricted	Total
Endowment net assets, January 1, 2009	$ 43,354,651	3,472,017	4,592,394	51,419,062
Donor-restricted contributions	—	—	160,255	160,255
Investment income	13,204,329	1,674,959	—	14,879,288
Release of endowment net asset restrictions	(1,429,500)	(499,596)	—	(1,929,096)
Additions from operations	4,343,797	—	—	4,343,797
Endowment net assets, December 31, 2009	$ 59,473,277	4,647,380	4,752,649	68,873,306

The following table summarizes the changes in endowment net assets for the year ended December 31, 2008:

	Unrestricted	Temporarily restricted	Permanently restricted	Total
Endowment net assets, January 1, 2008	$ 68,588,575	1,397,870	3,835,239	73,821,684
Adjustment for the effects of the change in governing law and the provisions of ASC 958-205 as of January 1, 2008	(5,064,967)	5,064,967	—	—
Adjusted endowment net assets, January 1, 2008	63,523,608	6,462,837	3,835,239	73,821,684
Donor-restricted contributions	—	—	757,155	757,155
Investment loss	(19,293,382)	(3,144,149)	—	(22,437,531)
Release of endowment net asset restrictions	(1,039,300)	(461,811)	—	(1,501,111)
Additions from operations	163,725	615,140	—	778,865
Endowment net assets, December 31, 2008	$ 43,354,651	3,472,017	4,592,394	51,419,062

(Continued)

(b) Funds with Deficiencies

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the level that the donor or the Act requires the Society to retain as a fund of perpetual duration. Deficiencies of this nature were funded by operations and amounted to $70,137 as of December 31, 2009 and $615,140 as of December 31, 2008. These deficiencies resulted from the significant market losses on long-term investments that occurred in 2008, which occurred shortly after the investment of new permanently restricted contributions and continued appropriation for certain programs that was deemed prudent by the Board of Trustees. Subsequent gains occurred in 2009 due to the partial recovery in the financial markets that restored $545,003 of the fair value of the assets of the affected endowment funds to their required level, which have been classified as an increase in unrestricted net assets in 2009.

(c) Return Objectives and Risk Parameters

The Society has adopted investment and spending policies for endowment assets that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain the purchasing power of the endowment assets. Endowment assets include those assets of donor-restricted funds that the organizations must hold in perpetuity or for a donor-specified period as well as board-designated funds. Under this policy, as approved by the Board of Trustees, the endowment assets are invested in a manner that is intended to produce an average annual real rate of return of approximately 6% over the long term. Actual returns in any given year may vary from this amount.

(d) Strategies Employed for Achieving Objectives

To satisfy its long-term rate-of-return objectives, the Society relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The Society targets a diversified asset allocation that places emphasis on investments in equities (allocation in the portfolio between 65% to 85%, with foreign equities comprising no more than 25% of the equity total), fixed income securities (allocation in the portfolio between 15% to 25%) and alternatives (currently real estate investment trusts with an allocation in the portfolio of no more than 10%) to achieve its long-term return objectives within prudent risk constraints.

(e) Spending Policy and How the Investment Objectives Relate to Spending Policy

The Society has a policy of appropriating for distribution each year 5% of its true endowment funds' average fair value using the average of the prior four years' ending fair value, normalized for intervening contributions and appropriations, through the calendar year-end immediately preceding the fiscal year in which the distribution is planned. The Society has a policy of appropriating for distribution each year 5% of the Board-designated Operations Support Fund's average fair value using the average of the prior four years' ending fair value through the calendar year-end one year preceding the fiscal year in which the distribution is planned. In establishing these policies, the Society considered the expected return on its endowment. Accordingly, the Society expects the current spending policy to allow its endowment to maintain its purchasing power by growing at a

rate, on average over time, equal to planned payouts. Additional real growth will be provided through new gifts and any excess investment return.

(8) Severance and Study Leave Pay

Certain employees of the Society receive vested rights to severance and study leave pay based upon salary and years of service. The Society provides for this obligation over the related years of the employees' service. The provision for severance and study leave pay charged to expense totaled $114,584 and $94,803 in 2009 and 2008, respectively.

(9) Pension and Postretirement Benefits

(a) The Society has contributory retirement plans (the Plans) covering substantially all full-time employees. The Plans are administered by, and related assets are maintained with, Teachers Insurance and Annuity Association and College Retirement Equities Fund. The Society's retirement expenses for the Plans totaled approximately $1,194,584 and $1,173,749 in 2009 and 2008, respectively.

(b) The Society sponsors a defined benefit postretirement medical plan that covers substantially all full-time employees. Under the plan provisions, employees who retire from the Society at age 62 or older with at least 12 years of service are eligible for benefits under the plan. Plan benefits consist of health insurance coverage under a Medicare Supplement Plan and reimbursement of Medicare Part B premiums. Employees who retire before age 62 may qualify for coverage under the plan according to a longer service requirement schedule established by the Society. Spouses of eligible retirees are not covered. The plan is noncontributory and is unfunded.

In 1998, this plan was amended to include the prior service of employees previously leased from the University of Michigan as eligible service when such persons became Society employees. The resulting prior service cost of these employees is being amortized over their estimated average future service period until retirement.

Effective January 1, 2007, the plan was further amended to limit the annual benefit per retiree to $4,000 with no other limits applied to the Medicare Part B or "Medigap" insurance premiums. The amendment also limits the eligible population to retirees eligible under the prior provisions at June 30, 2006 and Society employees as of June 30, 2006. There is no provision for this maximum benefit amount to increase over time. This amendment resulted in a prior service credit of approximately $2,975,000.

AMERICAN MATHEMATICAL SOCIETY

Notes to Financial Statements

December 31, 2009 and 2008

Net postretirement benefit cost for the years ended December 31, 2009 and 2008, consisted of the following components:

		2009	2008
Service cost	$	127,206	127,206
Interest cost		243,104	228,499
Amortization of prior service cost, pre-2007 amendment		1,722	1,722
Amortization of prior service credit, 2007 amendment		(246,258)	(246,258)
Amortization of net experience losses		99,678	101,602
Net postretirement benefit cost	$	225,452	212,771

The prior service cost (credit) and net loss (gain) expected to be recognized as components of net periodic postretirement benefit cost for the year ending December 31, 2010 are approximately ($246,258) and $93,900, respectively.

The following table reconciles the plan's funded status with the amounts presented in the Society's financial statements at December 31, 2009 and 2008:

		2009	2008
Projected postretirement benefit obligation, beginning of the year (and funded status)	$	4,344,865	4,079,327
Service and interest cost for the year		370,310	355,705
Benefits paid		(94,362)	(90,167)
Actuarial gain recognized in the year incurred		(77,658)	—
Projected postretirement benefit obligation, end of year	$	4,543,155	4,344,865
Net liability recognized in the balance sheet	$	4,543,155	4,344,865

The following table presents additional information relating to the plan for the years ended December 31, 2009 and 2008:

Discount rate	5.50%
Healthcare cost trend rate assumed for next year	Not applicable
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	Not applicable
Year that the rate reaches the ultimate trend rate	Not applicable

(Continued)

The expected future benefit payments under plan provisions for the next ten years are as follows:

Year-end:		
2010	$	140,000
2011		139,000
2012		142,000
2013		144,000
2014		139,000
2015 – 2019		642,000

(10) Designated Unrestricted Net Assets

The Board of Trustees of the Society has designated components of unrestricted net assets to support certain purposes. All such designated funds within unrestricted net assets are supported by the unrestricted portion of the long-term investment portfolio. The Economic Stabilization Fund is designated to provide support for the Society in future years should an unexpected need arise. The Operations Support Fund is designated to provide current operating support to the Society via use of a 5% spending rate applied to the three-year moving average value of the fund. The Journal Archive Fund is designated to accumulate funds to support changes that may be necessary for electronic files to be available for future use due to as-yet-unforeseen technological changes. The Young Scholars Fund was created by the Board of Trustees in 2000 to augment the funds in Epsilon Fund for Young Scholars, a true endowment fund that supports programs for high school mathematics students.

The following comprise the balances in these designated funds within unrestricted net assets as of December 31:

		2009	**2008**
Economic Stabilization Fund	$	23,114,000	22,879,386
Operations Support Fund		35,124,438	20,082,698
Journal Archive Fund		719,177	523,142
Young Scholars Fund		585,799	484,565
Total	$	59,543,414	43,969,791

(Continued)

(11) Temporarily Restricted Net Assets

Temporarily restricted net assets consist of amounts restricted by donors for the following purposes as of December 31:

		2009	2008
Restricted purpose:			
Prizes and scholarships	$	254,780	234,151
Lectures and symposia		36,124	22,972
Fellowships		116,940	148,610
Epsilon awards		90,590	54,932
Book/Journal donation project		10,493	10,493
Charitable gift annuities		—	22,574
Graduate student travel program		36,691	25,000
National Mathematics Game		42,500	—
Journal Digitization		37,537	—
Other miscellaneous		47,637	63,917
Unspent spendable income from unrestricted use true endowment funds		25,702	—
Accumulated gains on true endowment gifts		4,647,380	3,472,017
Total	$	5,346,374	4,054,666

Net assets released from restrictions related to true endowment funds whose use of income is restricted by donors and other temporarily restricted funds totaled $332,638 and $259,329 in 2009 and 2008, respectively, entirely due to the accomplishment of the designated purposes. Assets released from restrictions related to true endowment funds whose use of income is unrestricted, but which the Board appropriates to support specific activities, totaled $251,298 and $297,478 in 2009 and 2008, respectively, entirely due to the accomplishment of the Board-approved projects' purposes.

(12) Permanently Restricted Net Assets

Permanently restricted net assets must be invested in perpetuity and are supported by the long-term investment portfolio as well as other assets of the Society. The Society has two types of these donor-restricted endowments: gifts with no donor designations as to the use of income derived therefrom and gifts whose donors have designated a specific purpose in the gift instrument.

(Continued)

These endowments consisted of the following at December 31:

		2009	2008
Endowment without donor designation on use of income	$	1,565,181	1,565,181
Endowment with donor designation on use of income:			
Prizes		866,581	836,028
Scholarships and fellowships		252,130	252,130
Symposia and lectures		270,000	270,000
China collaboration		366,757	366,757
Epsilon Fund for Young Scholars		1,432,000	1,302,298
	$	4,752,649	4,592,394

(13) Subsequent Events

For purposes of determining the effects of subsequent events on these financial statements, the Society has evaluated events subsequent to December 31, 2009 and through August 31, 2010, the date on which the financial statements were available to be issued.

There were no subsequent events to be disclosed based on this evaluation.

AMERICAN MATHEMATICAL SOCIETY

To: Investment Committee
From: Gary Brownell
Subject: May 21, 2010, Meeting Minutes
Date: May 27, 2010
Cc: Karen Mollohan, Don McClure

The Committee met from 9:00 to 10:30 on Friday, May 21, 2010. Committee members include John Franks (Chair), Linda Keen, and Ron Stern. Jane Hawkins and Bob Daverman also attended. Staff members attending include Connie Pass, Karen Mollohan, Don McClure, and Gary Brownell.

Attached are the following:

Exhibit 1. Investment Committee Charge
Exhibit 2. Long-Term Investment Policy
Exhibit 3. Investment related green pages:
- I-1 AMS Combined Investment Portfolios
- I-2 Long-Term Investment Portfolio Activity
- I-3 Investment Manager Performance
- I-4 Average Annual Returns For 1, 3, 5 And 10 Years
- I-5 AMS Intermediate Investment Activity

Exhibit 4. Selected Frontier Statistics and Alternatives to Frontier

1. **Performance review.** The following are the current portfolio returns (AMS calculated, net) vs. benchmarks for 2007, 2008, 2009, and year-to-date indicated for 2010. The red entries are those whose returns have trailed their benchmark by more than .5%. Additional details are in the I section of the green pages, which are attached to this agenda.

	2007	2008	2009	April 2010
Frontier	9.6% vs. 11.8%	-35.9% vs. -38.4%	30.1% vs. 37.2%	3.7% vs. 5.8%
Vanguard Total	5.6% vs. 5.7%	-37.0% vs. -37.3%	28.5% vs. 29.4%	8.3% vs. 8.6%
Fidelity Total	5.1% vs. 5.7%	-37.2% vs. -37.3%	28.0% vs. 29.4%	8.4% vs. 8.6%
Vanguard REIT	-16.5% vs. -16.8%	-37.1% vs. -38.0%	29.5% vs. 28.9%	17.8% vs. 17.9%
Cohen & Steers	-19.2% vs. -15.7%	-34.4% vs. -37.7%	30.2% vs. 27.9%	17.7% vs.17.7%
Fidelity Intl Ind	11.2% vs. 11.6%	-41.4% vs. -43.1%	28.1% vs. 32.4%	-1.6% vs. -0.8%
PIMCO	9.1% vs. 7.0%	4.8% vs. 5.2%	14.2% vs. 5.9%	4.1% vs. 2.8%
Total Portfolio	**5.4% vs. 5.4% (net)**	**-29.5% vs. -28.2% (net)**	**27.5% vs. 24.6% (net)**	**6.2% vs. 6.7% (net)**

The Committee discussed the returns. No action was proposed.

2. **Asset allocation.** The Committee considered whether any rebalancing should be made to conform to the current asset allocation policy (adopted at the November 2006 ECBT meeting and documented on the Investment Committee website http://www.ams.org/investcom/). Below is a spreadsheet showing the allocation percentages as of the date indicated. The current allocation policy is:

Equity investments (including foreign equities) 65%-85% of total.

Foreign equities	Up to 25% of equities.
Alternative investments (including emerging markets)	Up to 10% of total.
Fixed income	15%-25% of total.

ASSET ALLOCATION		**April 2010 Balance**	**%**	***Policy***
Equities				
US Equities	Frontier Capital Management	$4,826,000		
	Vanguard Total Mkt Fund	31,092,000		
	Fidelity Total Mkt Fund	9,400,000		
	Total domestic stock accounts	45,318,000		
Foreign Equities	Fidelity International Index	10,698,000		
	Total foreign equity accounts	10,698,000	19.1%	*Up to 25% of equities*
Total Equities		**56,016,000**	**76.5%**	***65%-85%***
Alternative Investments				
REITs	Vanguard REIT Fund	2,017,000		
	Cohen & Steers REIT Fund	2,343,000		
Total Alternative		**4,360,000**	**6.0%**	***Up to 10%***
Fixed Income	**PIMCO Total Return**	**12,863,000**	**17.6%**	***15%-25%***
TOTAL		**$73,239,000**	**100.0%**	

As of the date indicated, the portfolio conforms to the current allocation policy.

No action was proposed.

3. Spending rate and spendable income.

Current spending rate – 5%.
Next scheduled review of spending rate by BT – May 2012, following reviews of reserve policy (May 2011) and asset allocation (October/November 2011).

Spendable income history.

Year	**Total return**	**Spending rate**	**Spendable income from OSF**	**Available spendable income from endowments, income restricted.**	**Available spendable income from endowments, income unrestricted.**
2003	23.9%	5%	$ 668,000	$ 128,084	$ 252,637
2004	11.2%	5%	$ 661,800	$ 117,794	$ 255,753
2005	6.4%	5%	$ 612,500	$ 119,834	$ 255,189

2006	13.6%	5%	$ 637,000	$ 127,326	$ 263,011
2007	5.4%	5%	$ 724,300	$ 150,395	$ 283,764
2008	-29.5%	5%	$ 1,039,300	$ 164,919	$ 311,000
2009	27.5%	5%	$ 1,399,500	$ 222,596	$ 277,000
2010B	8%	5%	$ 1,451,100	$ 231,487	$ 287,936
2011B	8%	5%	$ 1,645,100	$ 200,394	$ 267,339

For information.

4. **Custodial services and Frontier Capital Management.** State Street Bank and Trust Company currently provides custodial services for the portfolio managed by Frontier Capital Management. They have recently advised us that the AMS account no longer meets their minimum requirement, and they are resigning as of July 31, 2010. Their representative says that State Street needs to make $25,000 from the account, and the Frontier account provides only $7,000. We have a couple of alternatives. We can keep Frontier as a manager and move the account to another custodian. We terminate our relationship with Frontier do one of the following:
    - Move the funds into a mutual fund already owned by AMS.
    - Move the funds into a new mutual fund with characteristics similar to Frontier.
    - Find a new manager and new custodian.

    There are other alternatives, but (with the exception of the third bullet) we've focused on those that do not require looking into a new asset class and that can be accomplished without too much difficulty. The third bullet probably could not be accomplished within the time required. If that alternative is attractive, it would require temporarily moving the funds into an existing mutual fund.

    The first page of Exhibit 4 repeats the historical information about Frontier from the November 2009 Investment Committee Meeting. The second page shows ten years of return information for Frontier, for selected Vanguard funds or trusts, and for certain growth and total market indices. These data show that over several years (8 years and 10 years):
    - Frontier has not consistently outperformed or underperformed its benchmark.
    - Frontier has generally underperformed the Vanguard Growth Index Fund, largely due to Vanguard's use of a different growth benchmark.
    - For both the 8 and 10 year periods, the Wilshire 5000 has outperformed the growth indexes and funds.

    The growth funds shown in Exhibit 4 use different benchmarks; the definitions are included.

    Many investors construct portfolios by segmenting the equity market into growth, value, large cap, small cap, domestic, etc. The AMS has gradually moved away from this approach and is now relying on broad indexes to achieve diversification. Keeping Frontier has been an exception to this trend. Evaluation of Frontier has focused more on the possibility of a higher overall return than the market as a whole and less on its role as a growth component of the portfolio. Given both our focus on broad indexes for the equity portion of the portfolio and the failure of Frontier (and growth indexes) to outperform the market as whole over the long-term, staff recommended that the Frontier account be closed and the funds transferred to the Vanguard Total Stock Market Fund.

    The Committee approved staff's recommendation and will make such a recommendation to the full BT.

- **Agenda for the October meeting.** The Committee proposed no items for the next meeting. However, staff noted that there would be a discussion (and probably a recommendation) of moving funds currently at Fidelity to similar funds at Vanguard.

Investment Committee Charge

General Description

- Committee is a standing committee of the Board of Trustees.
- Number of members is generally four – the Treasurer (Chair) and the Associate Treasurer serve ex officio; a third Trustee and an additional member (who need not be a Trustee) are appointed by the Chair of the Board of Trustees.
- Term is three years for members who are not ex officio.

Responsibility

The Committee's primary responsibility is to assist the Board in fulfilling its oversight responsibilities with respect to the management of the Society's long-term investments.

Principal Activities

The principal activities of the Committee include:

- Monitoring the performance of the Society's investments. This may include, but is not limited to, meeting with investment advisors periodically and reviewing performance reports prepared by staff or others.
- Monitoring the asset allocation of the Society's investments. The Investment Committee was granted the authority (at the May 2008 BT meeting) to direct staff to rebalance the investment portfolio, within the range of the current asset allocation policy set by the Board of Trustees and by unanimous consent of the Investment Committee. The Board must be subsequently notified of any rebalancing[1].
- Reviewing, and where appropriate, modifying the Society's long-term investment strategy.
- Reviewing investment policies and recommending changes when appropriate.
- Recommending action to the Board of Trustees on matters that involve investments when appropriate.

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[1] The following rebalancing strategy was adopted in May 2009:

- Frequency of rebalancing: Compliance with the portfolio's asset policy should be monitored monthly. Ordinarily, the Investment Committee shall determine necessary rebalancing actions at its regularly scheduled meetings and take appropriate actions (such actions could be a recommendation to the Board of Trustees, instructions to staff regarding internal portfolio transfers to execute, or a combination of both).
- Threshold: The portfolio should be rebalanced when total equities or fixed income falls outside of its allocation policy.
- Rebalancing target: The Investment Committee's rebalancing guidelines should be:
    - Total equities should be rebalanced to the midpoint of its allocation range (75% based on current policy).
    - Foreign equities should be rebalanced to 5% below its maximum.
    - Fixed income should be rebalanced to the midpoint of its allocation range (20% based on current policy).
    - Alternative investment should be rebalanced to 5% below its maximum.
- The rebalancing strategy should be reviewed at the same five-year interval as the asset allocation policy.
-

Other Activities
The Committee recommends to the Board of Trustees which investment managers or investment vehicles to use.

The Committee recommends to the Board of Trustees the spending rate to be used for endowment funds.

Miscellaneous Information

The Committee generally meets at ABC or ECBT meetings, but may meet at other times.

Staff support for the Committee is provided by the Chief Financial Officer and Deputy Executive Director.

The Society maintains a website with information relevant to the Investment Committee. Such information includes minutes, investment performance information, and other information relating to the Society's investments.

Authorization
November 1990 ECBT Minutes, Item 7.10

Regarding the Investment Committee, the BT approved a recommendation from the Investment Committee that, henceforth, this Committee should consist of the Treasurer, Associate Treasurer, and another member of the BT to serve a three-year term. The BT concurred with the Investment Committee's suggestion that Gehring be appointed to serve on this Committee for 1991, 1992, and 1993.

November 1991 ECBT Minutes, Item 7.7

Add a fourth member to this Committee: T. Benny Rushing.

November 2002 ECBT Minutes, Item 3.5

Charge was updated.

May 2008 ECBT Minutes, Item 3.7

Granted the authority to direct staff to rebalance the investment portfolio (within the range of the current asset allocation policy set by the Board of Trustees)

May 2009 ECBT Minutes, Item 3.5

Adopted rebalancing strategy shown in footnote on previous page of this charge document.

Note to the Chair
Committee chairs should be informed, at the beginning of each fiscal period, the budget of their committees and cautioned to remain within the budget. Such items as travel reimbursement to, accommodations for, and meals for guests of any kind fall within these budgets.

Work done by committees on recurring problems may have value as precedent or may have historical interest. Accordingly, the Council has requested that a central file system be maintained for the Society by the Secretary. Committees are reminded that copies of every sheet of paper should be deposited (say once a year) in this central file. Confidential material should be noted, so that it can be handled in confidential manner.

Past Members

Year	Members
1991	Steve Armentrout, Frederick W. Gehring, Franklin P. Peterson
1992	Steve Armentrout, Frederick W. Gehring, Franklin P. Peterson, T Benny Rushing
1993	M. Susan Montgomery, Franklin P. Peterson, T. Benny Rushing, B. A. Taylor
1994	M. Susan Montgomery, Franklin P. Peterson, T. Benny Rushing, B. A. Taylor
1995	M. Susan Montgomery, Franklin P. Peterson, T. Benny Rushing, B. A. Taylor
1996	Roy L. Adler, Franklin P. Peterson, T. Benny Rushing, B. A. Taylor
1997	Roy L. Adler, Franklin P. Peterson, T. Benny Rushing, B. A. Taylor
1998	Roy L. Adler, John M. Franks, Franklin P. Peterson, T. Benny Rushing, B. A. Taylor
1999	Roy L. Adler, John M. Franks, B. A. Taylor
2000	Roy L. Adler, John M. Franks, Franklin P. Peterson, B. A. Taylor
2001	Roy L. Adler, John M. Franks, B. A. Taylor, Peter J. Weinberger
2002	Roy L. Adler, John M. Franks, B. A. Taylor, Peter J. Weinberger
2003	John M. Franks. Linda Keen, Donald E. McClure, Peter J. Weinberger
2004	John M. Franks. Linda Keen, Donald E. McClure, Peter J. Weinberger
2005	John M. Franks. Linda Keen, Donald E. McClure, Peter J. Weinberger
2006	John M. Franks. Linda Keen, Donald E. McClure, Peter J. Weinberger
2007	John M. Franks. Linda Keen, Donald D. McClure, Peter J. Weinberger
2008	John M. Franks. Linda Keen, Henry B. Laufer, Donald E. McClure
2009	John M. Franks. Linda Keen, Henry B. Laufer, Ronald J. Stern

AMERICAN MATHEMATICAL SOCIETY
LONG-TERM INVESTMENT POLICY

INTRODUCTION

Committee and Staff Responsibilities

The Committee's primary responsibility is to assist the Board in fulfilling its oversight responsibilities with respect to the management of the Society's long-term investments.

The principal activities of the Committee include:

- Monitoring the performance of the Society's investments. This may include, but is not limited to, meeting with investment advisors periodically and reviewing performance reports prepared by staff or others.
- Reviewing and where appropriate modifying the Society's long-term investment strategy.
- Reviewing investment policies and recommending changes when appropriate.
- Recommending action to the Board of Trustees on matters that involve investments when appropriate.

The CFO and other staff members monitor returns on the investment portfolios, budget additions to the funds, and manage the preparation of various reports. The Fiscal Department prepares periodic reports and maintains the underlying accounting records. The CFO is also the primary AMS contact for investment managers, custodians, and consultants.

The agenda and minutes of regular Investment Committee meetings should include

- a statement of the currently approved Spending Rate,
- the next scheduled date for review by the BT of the Spending Rate, and
- a summary of the amounts made available for the operating budget in the previous 5 years.

Intended Purpose of the Investments

The long-term investments support the Society's Endowment and Quasi-Endowment Funds. Endowment Funds are those that are subject to restrictions of gift instruments requiring that the principal be invested in perpetuity and the income only be utilized for the purpose stated by the donor. Quasi-Endowment funds have no external restriction as to principal, income, or gains and have been added to permanent investments at the discretion of the BT to be used for a specific purpose and managed under the same policies as endowment funds.

STATEMENT OF INVESTMENT OBJECTIVES AND POLICIES

This statement of investment objectives and policies governs the investment management of the Long-Term Investments of the American Mathematical Society.

Investment Objectives

The **overall financial objective** is to generate a real return adequate to provide meaningful growth in purchasing power over time while providing a modest level of income for the activities supported by the investments.

The **primary investment objective** is to attain an average annual real total return (net of investment fees) of at least 5% over the long term (trailing five year periods). Real return is the sum of capital appreciation or loss, (realized and unrealized) and yield (dividends and interest), adjusted for inflation by the Consumer Price Index. It is recognized that the real return objective may be difficult to attain in every five year period, but should be attainable over a series of five periods.

Investment Manager Structure

The Long-Term Investments include several investment vehicles with core investment in broad US index funds. The Investments include a portfolio managed by an external growth manager. This investment manager has complete discretion to manage the assets in that particular portfolio to best achieve the investment objectives and requirements, within the guidelines set forth in this policy statement.

Portfolio Composition And Asset Allocation

1. Diversification. The Long-Term Investments shall be diversified both by asset class (e.g., US equities, foreign equities, bonds, cash equivalents, and other alternative investments) and within each asset class (e.g., within equities by economic sector, industry, quality, size, etc.). The purpose of diversification is to provide reasonable assurance that potential market valuation adjustments related to a single security would not have a disproportionate impact.

2. Allocation. Asset allocation is a long-term policy that should be reviewed periodically, generally following the BT's review of long-term policies covering reserve funds. That is now being done at five-year intervals.

The dominant asset class is stocks. There should be an allocation to bonds as a hedge against deflation, and that allocation should be about 20%. There should be an allocation to alternative investments of up to 10% of the total portfolio. REIT funds and emerging markets are in this class. The following table shows the allocation percentages that result from the most recently approved allocation policy (November 2006):

Asset Class	**Allocation Range**
Equity investments (including foreign equities)	65%-85% of total
Foreign equities	Up to 25% of total equities (Oct07 Minutes)
Alternative investments	Up to 10% of total
Fixed income	15%-25% of total

3. Fixed Income Investments: These are comprised principally of bonds and cash equivalents. The purpose of these investments is to provide a deflation hedge and to reduce overall volatility.

4. Equity Investments: These are comprised principally of US and foreign stocks, with no more than approximately 25% of the total equities in the latter. These investments are intended to yield a total return that will provide for growth in principal. It is recognized that equity investing generally entails the assumption of greater market variability and risk.

Guidelines For The Fixed Income Investments

1. The objective of the fixed income investment is to outperform the Barclay's Capital U.S. Aggregate Bond Index (formerly Lehman Brothers Government/Corporate Bond Index) (net of fees).

2. Money market instruments, bond mutual funds, and bonds may be purchased. Fixed income managers (including mutual funds) are expected to employ active management techniques, but changes in average maturity should be moderate and incremental.

Guidelines For Equity Investments

1. The objective of the equity investments is to outperform the S&P 500 index (net of fees). Performance will be monitored on a monthly basis and evaluated over a trailing three to five year period.

2. Equity investments will be broadly diversified according to economic sector, industry, number of holdings and other investment characteristics, and may be placed in an index or common trust fund. Decisions as to individual security selection, security size and quality, number of industries and holdings, current income levels, turnover and other tools employed by active managers are left to broad manager discretion, subject to the usual standards of fiduciary prudence.

3. In general, equity managers are expected to maintain the style and segment disciplines for which they were hired.

Transaction Guidelines

1. All transactions should be entered into on the basis of best execution, which is interpreted normally to mean best realized price. Notwithstanding the above, commissions may be designated for payment of services rendered to the Society in connection with investment management.

Monitoring Of Objectives And Results

1. All objectives and policies are in effect until modified by the Investment Committee, who will review them at least annually.

2. If at any time a manager believes that any policy guideline inhibits his investment performance, it is his responsibility to clearly communicate this view to the Investment Committee.

3. The Long-Term Investment portfolios will be monitored periodically for consistency in investment policy, return relative to objectives, and investment risk as evidenced by asset concentrations, exposure to extreme economic conditions, and market conditions. Results will be measured over trailing three to five year periods.

4. Each investment manager is required to inform the Investment Committee of any change in firm ownership, organizational structure, professional personnel, account structure (e.g., number, asset size and account minimum), or fundamental investment philosophy.

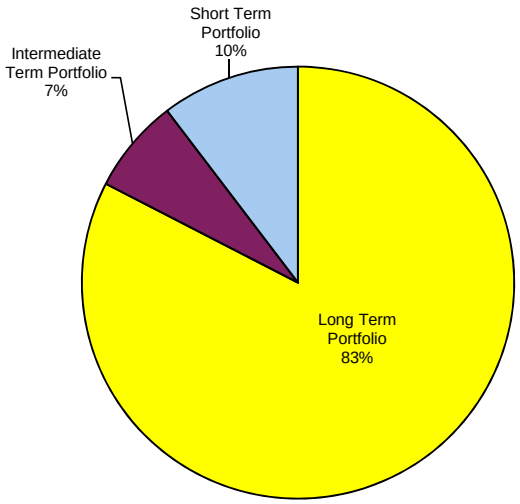
AMS COMBINED INVESTMENT PORTFOLIOS

As of December 31, 2009

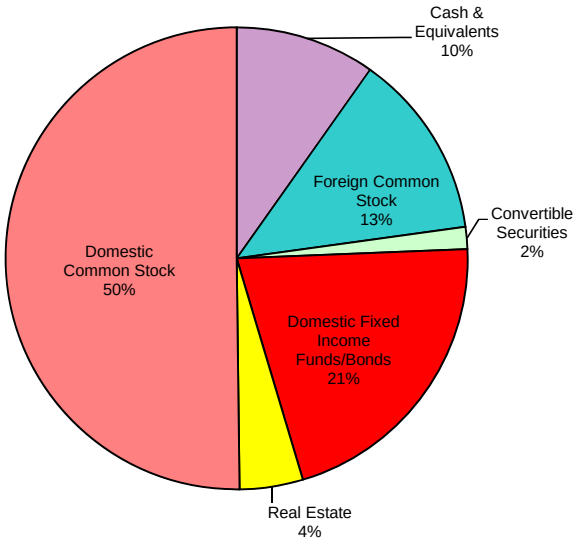
		YTD Return		
Operating Cash Accounts	417,938	0.0%		
Money Market Funds	4,344,328	1.0%		
Certificates of Deposit	3,318,000	2.7%		
$500,000 Face, 5-Year TIPS	572,452	7.4%	8,652,718	Short-term
Vanguard GNMA Fund	1,430,558	5.4%		
Vanguard ST Corporate Bond Fund	1,355,193	14.2%		
Vanguard LT US Treasury Fund	599,089	(11.9%)		
Fidelity Floating Rate Bond Fund	1,230,348	28.9%		
Vanguard Convertible Securities Fund	1,284,408	40.8%		
Common Stock	11,124	23.3%	5,910,720	Intermediate
PIMCO Total Return Fund	12,359,712	14.2%		
Vanguard REIT	1,712,443	29.5%		
Cohen and Steers REIT	1,990,358	30.2%		
Fidelity Total Stock Market Index Fund	8,668,393	28.0%		
Vanguard Total Stock Market Index Fund	28,699,906	29.5%		
Frontier Capital Management	4,646,289	30.1%		
Fidelity International Index	10,866,340	28.1%	68,943,441	Long-term
	$83,506,879			

Investments underlying the Beal Prize are excluded from the above.

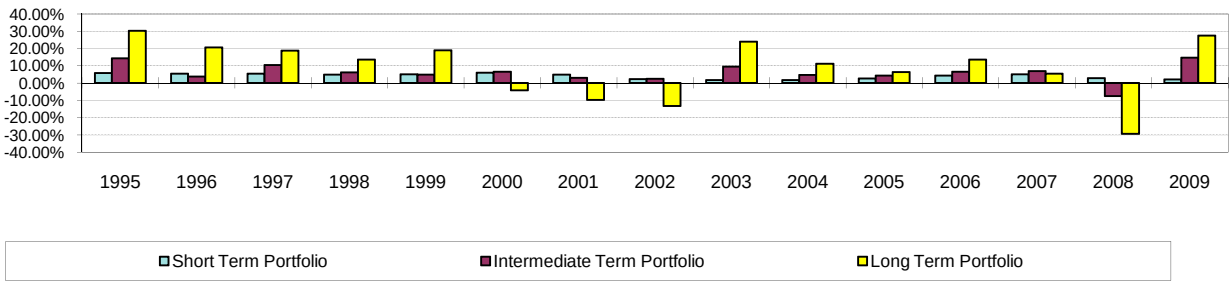
Portfolio by Investment Objective



Portfolio by Investment Type



Comparative Rates of Return on AMS Portfolios - By Objective



LONG-TERM INVESTMENT PORTFOLIO ACTIVITY

Exhibit 3

2007

	FCM	VANG TOT STK MKT	FID TOT STK MKT	VANG. REIT	C&S REIT	FIDELITY INT'L INDX	PIMCO	TOTAL
Fair market value, beginning of year	4,982	29,495	10,226	2,063	2,390	5,879	13,133	68,168
Additions (withdrawals)			(3,200)			4,700	500	2,000
Income earned	48	555	172	83	372	345	801	2,376
Realized and unrealized gains (losses)	469	1,086	356	(423)	(831)	188	432	1,277
Fair market value, end of period	5,499	31,136	7,554	1,723	1,931	11,112	14,866	73,821

2008

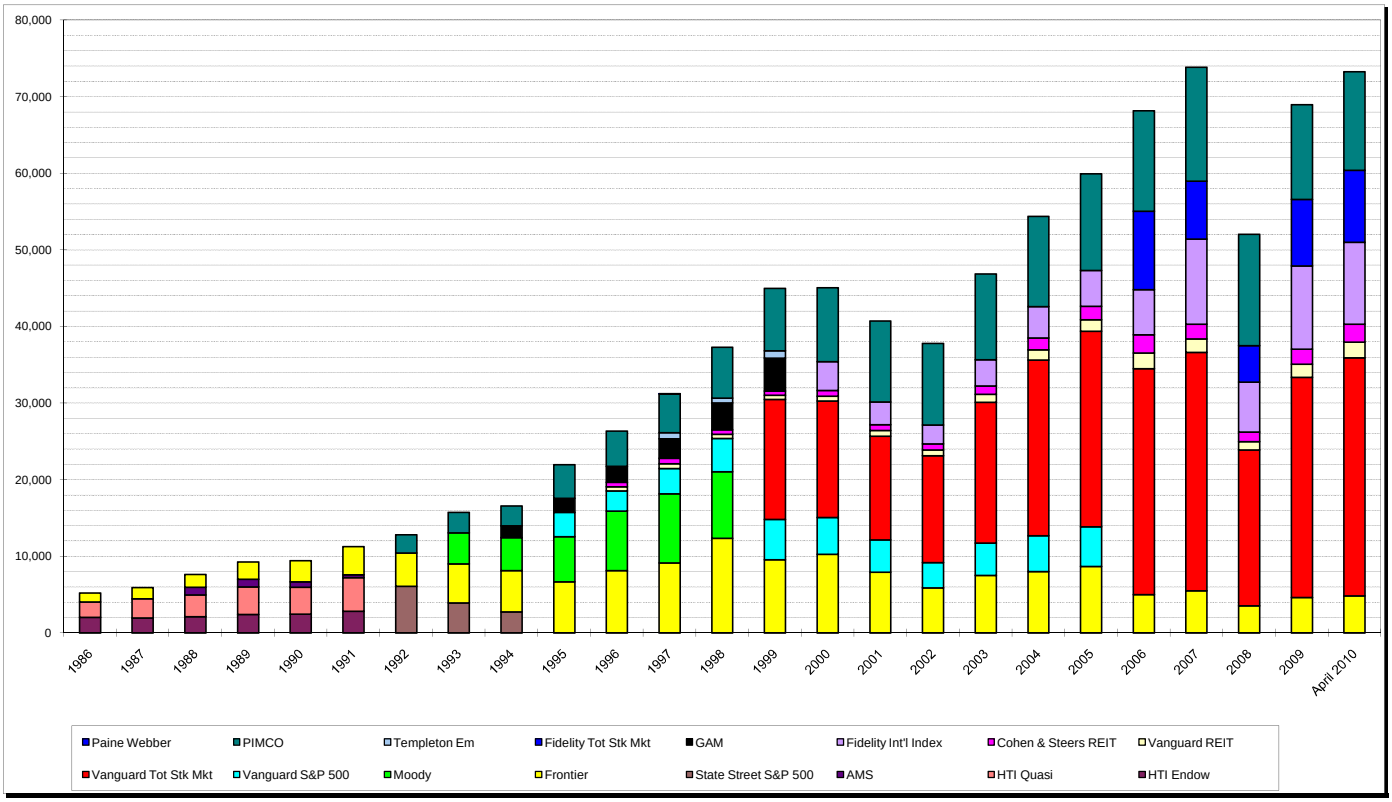
	FCM	VANG TOT STK MKT	FID TOT STK MKT	VANG. REIT	C&S REIT	FIDELITY INT'L INDX	PIMCO	TOTAL
Fair market value, beginning of year	5,499	31,136	7,554	1,723	1,931	11,112	14,866	73,821
Additions (withdrawals)		1,000					(1,000)	0
Income earned	45	557	121	84	67	223	1,434	2,531
Realized and unrealized gains (losses)	(1,997)	(12,354)	(2,928)	(722)	(731)	(4,825)	(761)	(24,318)
Fair market value, end of period	3,547	20,339	4,747	1,085	1,267	6,510	14,539	52,034

2009

	FCM	VANG TOT STK MKT	FID TOT STK MKT	VANG. REIT	C&S REIT	FIDELITY INT'L INDX	PIMCO	TOTAL
Fair market value, beginning of year	3,547	20,339	4,747	1,085	1,267	6,510	14,539	52,034
Additions (withdrawals)		1,894	1,893	175	175	1,596	(3,733)	2,000
Income earned	48	552	155	72	58	276	803	1,964
Realized and unrealized gains (losses)	1,051	5,915	1,873	381	490	2,484	751	12,945
Fair market value, end of period	4,646	28,700	8,668	1,713	1,990	10,866	12,360	68,943

April 2010

	FCM	VANG TOT STK MKT	FID TOT STK MKT	VANG. REIT	C&S REIT	FIDELITY INT'L INDX	PIMCO	TOTAL
Fair market value, beginning of year	4,646	28,700	8,668	1,713	1,990	10,866	12,360	68,943
Additions (withdrawals)								0
Income earned	12	121	34	14	12	11	124	328
Realized and unrealized gains (losses)	168	2,271	698	290	341	(179)	379	3,968
Fair market value, end of period	4,826	31,092	9,400	2,017	2,343	10,698	12,863	73,239



	April 2010	Asset Allocation Policy**
Total Equities	76.48%	65% - 85% of total
Foreign Equities	19.10%	Up to 25% of equities
Fixed Income(a)	17.56%	15% - 25% of total
Alternatives	5.95%	Up to 10% of total

INVESTMENT MANAGER PERFORMANCE

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Apr-10
TOTAL AMS RETURNS NET	(4.3%)	(9.8%)	(13.3%)	23.9%	11.2%	6.4%	13.6%	5.4%	(29.5%)	27.5%	6.2%
FRONTIER CAPITAL											
Reported return	(2.1%)	(22.8%)	(25.7%)	28.1%	6.8%	8.2%	5.2%	10.5%	(35.3%)	31.1%	NYA
AMS calculated return	(3.1%)	(23.5%)	(26.4%)	27.0%	5.9%	7.3%	4.5%	9.6%	(35.9%)	30.1%	3.7%
Asset allocations - Equities	92.0%	96.4%	97.2%	99.6%	94.1%	96.3%	97.8%	94.0%	97.1%	96.5%	92.7%
- Cash equivalents	8.0%	3.6%	2.8%	0.4%	5.9%	3.7%	2.3%	6.0%	2.9%	3.5%	7.3%
VANGUARD S&P 500 FUND											
Reported return	(9.1%)	(12.0%)	(22.1%)	28.6%	10.8%	4.9%	15.8%				
AMS calculated return (ends 12/20/06)	(9.1%)	(12.0%)	(22.1%)	28.6%	10.8%	4.8%	17.2%				
VANGUARD TOTAL STOCK MARKET (4*)											
Reported return (1/1/99 start)	(10.5%)	(10.8%)	(20.9%)	31.6%	12.6%	6.1%	15.7%	5.6%	(36.9%)	28.8%	8.3%
AMS calculated return (1/12/99 start)	(10.8%)	(10.8%)	(20.9%)	31.6%	12.6%	6.1%	15.7%	5.6%	(37.0%)	28.5%	8.3%
FIDELITY TOTAL STOCK MARKET (3*)											
Reported return (12/20/06 start)							NA	5.6%	(37.2%)	28.4%	8.4%
AMS calculated return (12/20/06 start)							1.9%	5.1%	(37.2%)	28.0%	8.4%
VANGUARD SPECIAL REIT INDEX (3*)											
Reported return	26.4%	12.4%	3.8%	35.7%	30.7%	11.9%	35.1%	(16.5%)	(37.1%)	29.6%	17.8%
AMS calculated return	26.4%	12.4%	3.8%	35.7%	30.7%	12.0%	35.1%	(16.5%)	(37.1%)	29.5%	17.8%
COHEN & STEERS REALTY SHARES (4*)											
Reported return	26.6%	5.7%	2.8%	38.1%	38.5%	14.9%	37.1%	(19.2%)	(34.4%)	32.5%	17.7%
AMS calculated return	26.6%	5.7%	2.8%	38.1%	38.5%	14.9%	37.1%	(19.2%)	(34.4%)	30.2%	17.7%
FIDELITY INTERNATIONAL INDEX (3*)											
Reported return (January 2000 forward)	(14.9%)	(21.9%)	(16.0%)	38.3%	19.9%	13.7%	26.2%	10.8%	(41.4%)	28.5%	(1.6%)
AMS calculated return	(13.7%)	(21.9%)	(16.0%)	38.3%	19.9%	13.7%	26.2%	11.2%	(41.4%)	28.1%	(1.6%)
TEMPLETON EMERGING MKTS INST											
Reported return (Thru Nov 2000)	(35.6%)										
AMS calculated return	(32.5%)										
PIMCO BOND FUND (5*)											
Reported return	12.1%	9.5%	10.2%	5.6%	5.2%	2.9%	4.0%	9.1%	4.8%	13.8%	4.1%
AMS calculated return	12.0%	9.5%	10.2%	5.6%	5.1%	2.9%	4.0%	9.1%	4.8%	14.2%	4.1%
COMPARATIVE INDICES											
S & P 500	(9.1%)	(11.9%)	(22.1%)	28.7%	10.9%	4.9%	15.8%	5.5%	(37.0%)	26.5%	7.0%
Russell 2500 (small cap)	4.3%	(1.2%)	(17.8%)	45.5%	18.2%	8.1%	16.2%	1.4%	(36.8%)	34.4%	14.4%
Russell 1000 Growth (large cap)	(22.4%)	(20.4%)	(27.9%)	29.8%	6.3%	5.3%	9.1%	11.8%	(38.4%)	37.2%	5.8%
NASDAQ Composite	(39.3%)	(21.1%)	(31.5%)	50.0%	8.7%	1.8%	9.5%	9.8%	(41.1%)	43.9%	8.5%
Wilshire 5000	(10.9%)	(11.0%)	(20.9%)	31.7%	12.6%	6.3%	15.9%	5.7%	(37.3%)	29.4%	8.6%
Morgan Stanley REIT Index	26.8%	12.8%	3.6%	36.8%	31.5%	12.1%	35.9%	(16.8%)	(38.0%)	28.9%	17.9%
NAREIT	26.4%	13.9%	3.8%	37.1%	31.6%	12.0%	34.0%	(15.7%)	(37.7%)	27.9%	17.7%
MSCI EAFE Index	(13.9%)	(21.2%)	(15.7%)	39.2%	20.7%	14.0%	26.9%	11.6%	(43.1%)	32.4%	(0.8%)
MSCI Emerging Mkts Free (June 1997)	(31.8%)										
91 Day Treasury Bills	6.0%	4.1%	1.7%	1.1%	1.0%	3.0%	4.8%	4.7%	1.8%	0.2%	0.0%
Barclays US Aggregate	11.6%	8.4%	10.3%	4.1%	4.3%	2.4%	4.3%	7.0%	5.2%	5.9%	2.8%

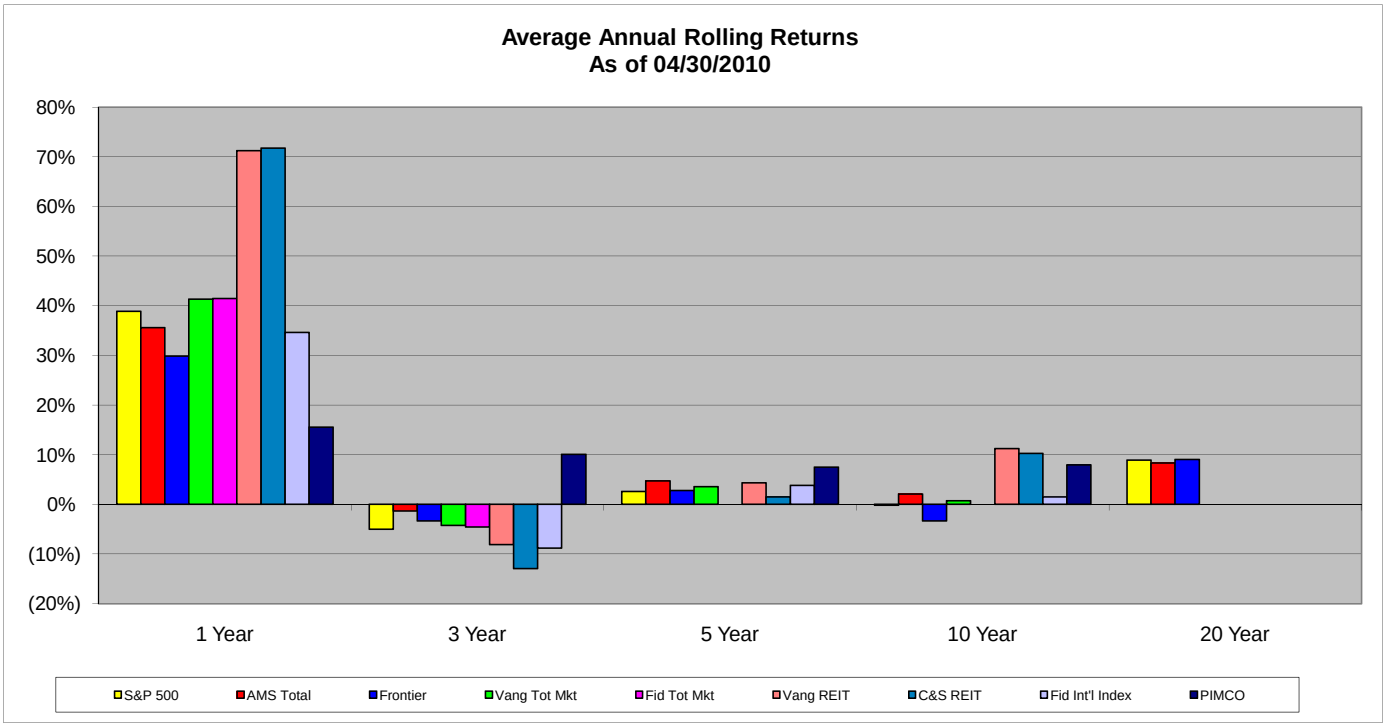


Exhibit 3

AMS Long Term Investments
Average Annual Returns for 1, 3, 5 and 10 years
As of December 31, 2009

	One Year	Three Years	Five Years	Ten Years	Twenty Years
Total AMS Portfolio	**27.52%**	**(1.77%)**	**2.82%**	**1.78%**	**7.84%**
Domestic Equities:					
Frontier	30.41%	(2.45%)	1.12%	(2.14%)	8.67%
Vanguard Total Market Index	28.47%	(5.09%)	0.97%	(0.22%)	
Fidelity Total Market Index (from 12/21/06)	28.01%	(5.44%)			
S&P 500	26.46%	(5.63%)	0.40%	(0.97%)	8.20%
Wilshire 5000 Full Cap	29.42%	(5.00%)	1.10%	(0.17%)	
Russell 2500 (small cap)	34.39%	(4.86%)	1.58%	4.91%	
Russell 1000 Growth Index (large cap)	37.21%	(1.89%)	1.63%	(3.99%)	
NASDAQ OTC Composite	43.89%	(2.39%)	0.73%		
Foreign Equities:					
Fidelity International Index	28.09%	(5.87%)	3.67%	1.18%	
MSCI EAFE Index	32.46%	(5.75%)	4.02%		
Alternatives:					
Vanguard REIT Index	29.51%	(12.01%)	0.59%	10.40%	
Cohen & Steers Realty Shares	30.25%	(11.62%)	1.70%	11.09%	
MSCI REIT Index	28.61%	(12.78%)	0.23%		
NAREIT Index	28.01%	(12.42%)	0.32%		
Fixed Income:					
PIMCO Total Return	14.20%	9.29%	6.91%	7.68%	
Barclays US Aggregate Bond Index	5.93%	6.04%	4.97%	6.33%	
3 Month Treasury Bill	0.16%	2.22%	2.88%		

AMS OPERATING INVESTMENTS: INTERMEDIATE PORTFOLIO

2006

	Vanguard ST Corp	Vanguard GNMA	Vanguard LT Treas	Vanguard Convertible Securities	Fidelity Floating Rate	Total
Market value, beginning of year	1,108,692	1,117,974	491,588	993,199	1,035,346	4,746,799
Int, dividend and gain distributions	52,026	59,656	27,352	116,808	55,458	311,300
Market valuation adjustments	13,989	3,107	(12,109)	64,606	22,544	92,137
Market value, end of period	1,174,707	1,180,737	506,831	1,174,613	1,113,348	5,150,236

2007

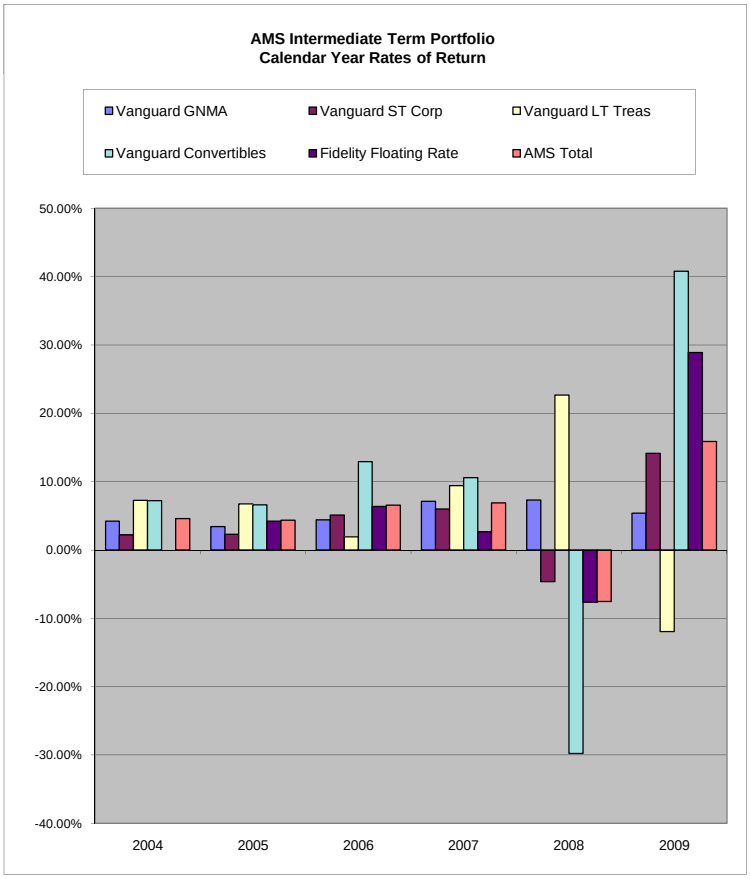
	Vanguard ST Corp	Vanguard GNMA	Vanguard LT Treas	Vanguard Convertible Securities	Fidelity Floating Rate	Total
Market value, beginning of year	1,174,707	1,180,737	506,831	1,174,613	1,113,348	5,150,236
Int, dividend and gain distributions	59,848	64,339	29,825	120,204	73,910	348,126
Market valuation adjustments	10,359	19,632	17,888	4,397	(44,152)	8,124
Market value, end of period	1,244,914	1,264,708	554,544	1,299,214	1,143,106	5,506,486

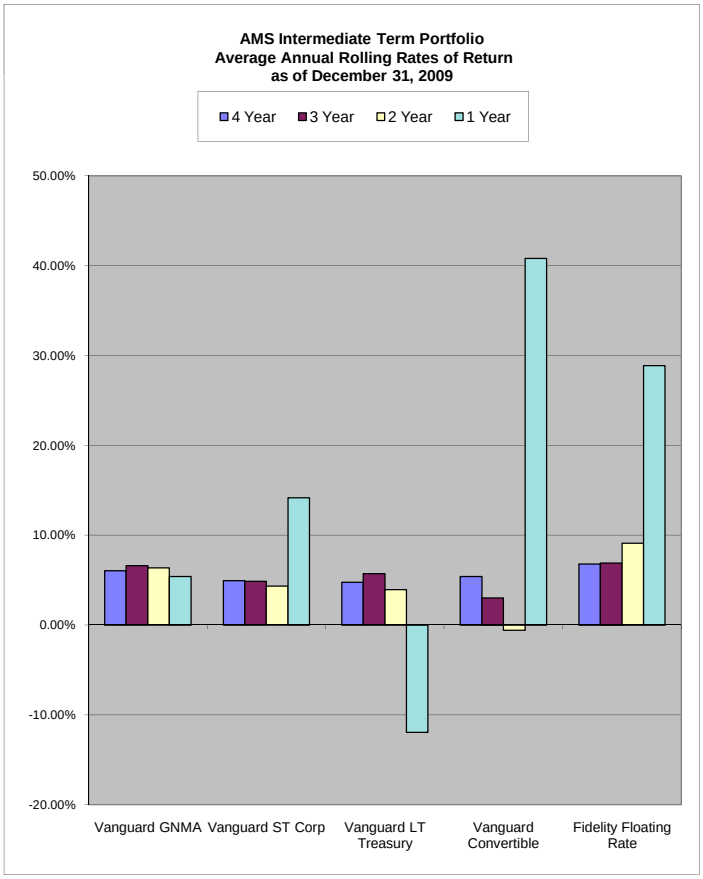
2008

	Vanguard ST Corp	Vanguard GNMA	Vanguard LT Treas	Vanguard Convertible Securities	Fidelity Floating Rate	Total
Market value, beginning of year	1,244,914	1,264,708	554,544	1,299,214	1,143,106	5,506,486
Int, dividend and gain distributions	60,326	65,618	31,445	37,089	56,973	251,451
Market valuation adjustments	(118,193)	27,024	94,357	(424,168)	(245,290)	(666,270)
Market value, end of period	1,187,047	1,357,350	680,346	912,135	954,789	5,091,667

2009

	Vanguard ST Corp	Vanguard GNMA	Vanguard LT Treas	Vanguard Convertible Securities	Fidelity Floating Rate	Total
Market value, beginning of year	1,187,047	1,357,350	680,346	912,135	954,789	5,091,667
Int, dividend and gain distributions	53,235	65,671	48,369	47,673	42,825	257,773
Market valuation adjustments	114,911	7,537	(129,626)	324,600	232,734	550,156
Market value, end of period	1,355,193	1,430,558	599,089	1,284,408	1,230,348	5,899,596





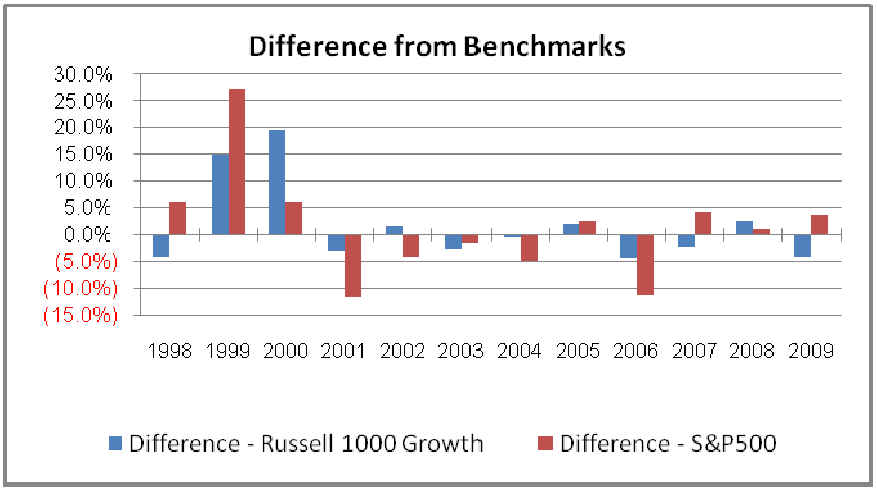
Selected Frontier Statistics

Additional statistics are available in Exhibit 3 and in material provided by Frontier.

Year	Net Additions (Withdrawals)	Note
1986	1,200	Initial Investment
1987	300	
1988	-	
1989	58	
1990	423	
1991	486	
1992	61	
1993	-	
1994	250	
1995	(500)	
1996	23	
1997	(750)	
1998	-	
1999	(5,900)	Bigger commitment to index funds. Also closed out Moody Aldrich ($8,243) at this time.
2000	1,000	
2001	-	
2002	-	
2003	-	
2004	-	
2005	-	
2006	(4,144)	Bigger commitment to index funds.
2007	-	
2008	-	
2009	-	

At December 31, 2009, the value of our Frontier account was $4,646,000.

The following chart shows recent history of Frontier returns compared to the Russell 1000 Growth Index and the S&P 500 Index.



GROWTH FUND ALTERNATIVES													
	Benchmark	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	10 Yr Avg	8 Yr Avg
Frontier Capital													
Reported return		(2.1%)	(22.8%)	(25.7%)	28.1%	6.8%	8.2%	5.2%	10.5%	(35.3%)	31.1%		
AMS calculated return	Russell 1000 Growth	(3.1%)	(23.5%)	(26.4%)	27.0%	5.9%	7.3%	4.5%	9.6%	(35.9%)	30.1%	(2.8%)	0.2%
Vanguard													
U.S. Growth Fund (Admiral Shares)	Russell 1000 Growth			(35.7%)	26.3%	7.3%	11.4%	2.0%	10.4%	(37.7%)	35.1%		(1.0%)
Russell 1000 Growth Index Trust (Inst.)	Russell 1000 Growth					6.3%	5.3%	9.1%	11.8%	(38.4%)	37.3%		
Growth Index Fund	MSCI US Prime Market Growth	(22.1%)	(12.8%)	(23.6%)	26.1%	7.3%	5.2%	9.2%	12.7%	(38.2%)	36.5%	(2.6%)	1.5%
Comparative Indices													
Russell 1000 Growth		(22.4%)	(20.4%)	(27.9%)	29.8%	6.3%	5.3%	9.1%	11.8%	(38.4%)	37.2%	(4.0%)	1.0%
MSCI US Prime Market Growth Index (Bara Growth Index through 5/16/03)		(22.1%)	(12.7%)	(23.6%)	26.1%	7.4%	5.3%	9.2%	12.7%	(38.2%)	36.5%	(2.6%)	1.6%
Willshire 5000		(10.9%)	(11.0%)	(20.9%)	31.7%	12.6%	6.3%	15.9%	5.7%	(37.3%)	29.4%	(0.2%)	2.7%

The Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values. The Russell 1000 Growth Index is constructed to provide a comprehensive and unbiased barometer for the large-cap growth segment. The Index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect growth characteristics.[2]

The MSCI US Prime Market Growth Index is a subset of the MSCI US Prime Market 750 Index, which represents the universe of large and medium capitalization companies in the US equity market. This index targets for inclusion 750 companies and represents, as of October 29, 2004, approximately 86% of the capitalization of the US equity market.[3]

[2] The Russell Investments website.

[3] The MSCI website.