

CSTA ANNUAL REPORT FOR 2006

Chris Stephenson
Executive Director

1.1 CSTA Board

Robb Cutler: President (2006-2008)
Michelle Hutton: Vice-President (2006-2008)
Charmaine Bentley: 9-12 Teacher Representative (2006-2007)
Debbie Carter: 9-12 Teacher Representative (2006-2007)
Steve Cooper: University Faculty Representative (2006-2008)
Barb Ericson: Teacher Education Representative (2006-2008)
Judith Gal-Ezer: International Representative (2006-2008)
Ghada Khoury: State DOE Representative (2006-2007)
Leigh Ann Sudol: At Large Representative (2006-2008)
Fran Trees: At Large Representative (2006-2007)
Anita Verno: College Faculty Representative (2006-2007)

1.2 Mission Statement

The Computer Science Teachers Association is a membership organization that supports and promotes the teaching of computer science and other computing disciplines. CSTA provides opportunities for K-12 teachers and students to better understand the computing disciplines and to more successfully prepare themselves to teach and learn.

1.3 CSTA Standing Committees

Curriculum: Anita Verno, Chair
Equity: Michelle Hutton, Chair
Membership: Charmaine Bentley
Policy & Advocacy: Robb Cutler, Chair
Professional Development: Fran Trees, Chair
Publications and Communications: Pat Phillips, Chair
Research: Debbie Carter, Chair
Standards & Certification: Ghada Khoury, Chair

1.4 Board of Directors Meetings

November 4-6, 2005: Las Vegas NV
July 10, 2006: San Diego CA

2.0 Project Summary

Organizational:

- *Affiliations:* Chris Stephenson (on-going): CSTA has been working to build alliances with state educational technology organizations. CSTA has two new affiliate organizations (MACUL and Oregon CSTA). ISTE has decided not to enter into an affiliate relationship with CSTA at this time.

- *Chapters*: Chris Stephenson, Robb Cutler, Michelle Hutton, Debbie Carter (on-going): CSTA has been providing informal support for potential local CSTA chapters in CA, CT, and PA. The CSTA Board is now developing a comprehensive policy on chapter formation and support.
- *International Outreach*: Judith Gal-Ezer (on-going): CSTA has added a new Director with responsibilities for international outreach to the Board. This director is now helping the Board to connect to the international educational community and is establishing a presence for CSTA at international conferences.
- *Math Teacher Outreach*: Leigh Ann Sudol (on-going) CSTA is also looking to reach out to a more diverse audience of teachers. There are approximately 106,550 high school math teachers in the U.S. (NCTM does not distinguish between high school and elementary educators). Recent announcements about funding for science and math initiatives have created a highly competitive environment and NCTM and NSTA are clearly feeling the need to ensure that this funding goes to math and science teachers rather than CS teachers. For this reason, CSTA is taking a stealth approach to determining math teacher interest in computer science topics. CSTA has submitted a mini-conference proposal to the upcoming NCTM regional conference in Atlantic City. A number of CSTA volunteers are also planning to attend the upcoming national conference to determine: the number of CS sessions, the size of the audience, the topics which seem to draw the most people etc.
- *Nominations and Elections*: Maureen Biggers, Chris Stephenson (completed May 1, 2006): CSTA formalized its nominations and election process. In order to maintain stability on the Board, it was decided that the Chair and Vice Chair would be elected positions (in accordance with the by-laws) and that 50% of the Board positions would be up for election this year (with the remaining positions to transition to elected positions next year). This transition from appointed to an elected Board highlights the need for more formalized policies and procedures (beyond the by-laws) and as a result, the Chair has formed a committee to create a Board policy manual.
- *Financial Review*: CSTA Board (completed July 10, 2006): The Board has completed its fiscal review of the operations, revenue, and expenditures for this first full year of CSTA operations.
- *Strategic Plan*: Chris Stephenson (completed November 30, 2005): The CSTA Board voted to officially adopt the CSTA Strategic Plan and to place a web version of this document on the CSTA website.

Communications

- *CSTA Voice*: Pat Phillips, Chris Stephenson (on-going): Four issues of the CSTA Voice have been published and the response from members and interested faculty and industry representatives has been extremely positive.
- *Advocate Blog*: Chris Stephenson (on-going): The *Advocate* blog is slowly building an audience. The CSTA Board is reviewing strategies to increase the frequency, regularity and diversity of postings.
- *Policy Brochure*: Sara Appleyard, Widmeyer Communications (on-going): CSTA has created a policy-makers brochure to provide information and talking points for community and educational leaders interested in supporting and promoting K-12 computer science education. This brochure has been distributed to key legislators and

policy makers currently working on education issues at the federal and state level.

Funding

- *Corporate Funding:* Chris Stephenson (on-going): CSTA continues to build relationships with its corporate sponsors. Currently IBM, Microsoft, and Sun make annual donations to CSTA as Gold Level Sponsors in addition to funding specific partnership projects.
- *Operational Grant:* Chris Stephenson (Chris Stephenson, completed April 8, 2006): CSTA completed its second successful funding proposal to the National Science Foundation. This grant, provided under the Broadening Participation in Computing program will provide operation funding of \$100,000 per year for three years. Preparation of the annual report for this grant (due September 1, 2006) is now underway.
- *SGB Funding:* Chris Stephenson (completed February 10, 2006). ACM's SGB voted to renew its commitment to provide \$100,000 per year for three years. (This is the second year of its three-year commitment).
- *Project Funding:* Microsoft has agreed to provide funding for the 2007 Computer Science and Information Technology Symposium.

Membership

- *Total Active Members:* 4538 (4209 Individual, 329 Institutional)
- *Membership Satisfaction Survey:* Charmaine Bentley, Chris Stephenson, Michelle Kitaoka (completed April 18, 2006): CSTA completed its first online Membership Satisfaction Survey with a 16.5% response rate. The survey revealed high levels of satisfaction with current CSTA member benefits and provided valuable information regarding potential future benefits. It also indicated, however, that CSTA members are not well informed as to the wealth of benefits available. The CSTA Board is therefore considering developing of a new members brochure to improve member knowledge of CSTA membership benefits.

Projects

- *The New Educational Imperative: Improving High School Computer Science Education:* Chris Stephenson, Judith Gal-Ezer, Anita Verno, Bruria Haberman (completed June 1, 2006): The white paper was completed in May and distributed (via mail) to 29,000 state and federal level educational policy and decision makers. A pdf of the report has also been made available on the CSTA website.
- *Computer Science and Information Technology Symposium:* Chris Stephenson (completed July 8, 2006). The CSIT symposium, sponsored by Microsoft, was held on July 8th (directly following NECC) at the Hyatt Hotel in San Diego. A total of xxx teachers attended this event. The speakers included Kevin Schofield of Microsoft and Ellen Spertus of Mills College/Google. Evaluations from the event are now being tabulated and the results will be posted on the event website.
- *IBM/CSTA Curriculum Resources:* Chris Stephenson, Anita Verno, Margaret Butler, Joon Yee Chua (completed March 2006): IBM and CSTA worked together to develop three new downloadable high school computer science curriculum resources. The project goal was to support high school computer science education by providing

teacher-developed resources that promote teaching and learning, and engage students in ways that will encourage them to acquire the skills they need to compete in the global marketplace. The three resources include a project-based learning module for teacher professional development, a learning unit on web design, and a unit on learning object-oriented programming in Java using the Pong game. All of the resources adhere to the standards defined in the ACM Model Curriculum for K-12 Computer Science.

- *K-12 Virtual Binders*: Maureen Biggers, Michelle Hutton, Charmaine Bentley (completed February 2006): CSTA's Membership Committee completed the third of its theme-based virtual binder collections of articles drawn from the DL. These collections, only available to CSTA members, now include careers, equity, and teaching strategy collections. Three more binders are planned.
- *TECS Workshops*: Fran Trees, Jennifer Wroblewski (completed January 2006): CSTA's Professional Development Committee successfully launched the Teacher Engagement for Computer Science (TECS) workshops. TECS, like JETT workshops, are offered in partnership with universities and colleges. Unlike JETT, however, TECS focuses on introductory CS concepts and are designed to meet the professional development needs of teachers who are teaching pre-AP CS courses at the middle and high school level.
- *Equity Poster*: Chris Stephenson, Michelle Hutton (completed June 2006): CSTA worked with ACM-W and the American Association for School Counselors to create a poster for middle school and high school classrooms. The 3x4 poster promotes computer science as a rich, welcoming, and exciting field for all students (with special focus on minority students and women). CSTA is working with partner organizations to disseminate the poster across the country in time for the beginning of the next school year.

3.0 Plans

3.1 Projects to Be Completed in the Coming Year

- *Model Curriculum Preface*: Chris Stephenson (expected completion date October 2006): The *ACM Model Curriculum for K-12 Computer Science Education* is beginning to have the intended impact on K-12. In recent months both the state of Georgia and the province of Nova Scotia have redesigned their computing curriculum based upon our model. Several additional schools have contacted us to indicate that they are also using our model. Although it was published in 2003, we feel it is important to update the document with information about new thinking on why CS education is important and how teachers can use new strategies to truly engage all students (especially those who are traditionally disenfranchised from the discipline and field). Our plan is to bring together a small group (4-5) of top notch educators who are currently working on these issues to create a new 4 page preface. This new document will be bundled with the current edition of the *Model Curriculum* until our next reprinting. At that time, we will do a redesign of the *Model Curriculum* and include the new preface.
- *Web Repository*: Debbie Carter, Joe Kmoch, Chris Stephenson, Boots Cassel (on-going): CSTA's new web repository of K-12 computer science teaching and learning

materials was debuted at the National Educational Computing Conference and the AP National Conference. The web repository uses a classification scheme keyed to the *ACM Model Curriculum for K-12 Computer Science* and provides an easy-to-use interface for searching, retrieving and submitting resources. Content management is provided by a volunteer Steering Committee. CSTA has joined with several institutions, including Villanova University, in a Pathways grant proposal intended to support teacher awareness and training for the repository.

- *Curriculum Support Documents*: Betty Parys, Anita Verno (expected completion date July 2007): CSTA's Curriculum Committee has been working on supplementary documents to support the model curriculum. The Objectives and Outlines document for the Level II course has been completed and the final version posted on the CSTA website. A similar document for the Level III course is now under development.
- *Certification Survey*: Ghada Khoury, Chris Stephenson, Sheryl Bernheine (expected completion January 2007): The results of the CSTA Survey of state departments of education to determine the certification requirements for high school computer science teachers are now being tabulated and analyzed. Once the results are tabulated we will begin work on a member accessible database containing the information for each state.
- *Teacher Pre-Service Survey*: Debbie Carter (expected completion May 2007): The Research Committee is collecting and tabulating the results of a survey of faculties and schools of education to determine the level of support for pre-service computer science educators.
- *Panel/ White Paper Grant*: Chris Stephenson (on-going): NSF continues to provide funding for CSTA's white paper project. The \$70,000 grant for the international panel and white paper expires in November. Preparation of the final report for this grant (due November 30, 2006) is now underway.
- *Member Communications*: CSTA Board (beginning July 10, 2006 – Expected completion December 1, 2006). The CSTA Board is considering two new outreach sources to improve direct communication with members: an opt-in listserv and a community forum.
- *Careers Brochure*: Chris Stephenson (on-going) CSTA is working with the ACM Ed Board to help it test and disseminate a new careers brochure for high school students.

3.2 Changes or Milestones in Projects:

None anticipated

3.3 New Projects

- *National Conference*: preliminary work to begin on organizing an annual national conference for K-12 computer science teachers
- *Policy Manual*: completion of a CSTA Board Policy Manual
- *Chapters*: completion of a CSTA Chapters policy document.

3.4 Recruitment Plans

CSTA has been fortunate to attract several young and dynamic teachers to its Board and committees. Although recruitment has not been a problem to date, we feel it is very important to focus on developing the leadership skills of these younger volunteers by

placing them in positions of responsibility and helping them to grow into those positions through mentoring.

Appendix A: CSTA Board Contact Information

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