

cryptography and other computer security areas. USACM recommended changes to the DMCA law to shift the focus from legislating technology to penalizing acts of nefarious behavior so that technologists are not penalized for conducting research or for making other non-infringing uses of copyright protected materials.

USACM recommended an independent review of the Pentagon's Total Information Awareness (TIA) program. While welcoming research into data mining, fusion methods, and privacy-enhancing technologies, USACM recommended a rigorous independent review of the TIA program under development by the Pentagon. USACM educated policymakers regarding the security, privacy, economic, and personal risks associated with the effort and suggested a thorough examination of the technical feasibility and practical reality of the entire program. USACM's comments were cited in research materials prepared by the Congressional Research Service.

The Cyber Security Research and Development Act was enacted into law incorporating many of USACM's policy recommendations. Passed in November of 2002, the new law authorizes the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST) to spend \$903 million over the next five years on systems security research, education, and related programs. The law builds on USACM recommendations offered in Congressional testimony by Dr. Eugene Spafford and Dr. Lance Hoffman and establishes new centers for computer and network security research at universities and new university-industry partnerships for security research. Finally, the law authorizes specific funds to establish post-doctoral fellowships and to increase the number of faculty qualified to teach college-level cyber-security courses, both USACM recommendations.

The Help America Vote Act of 2002 was enacted into law including certain USACM voting technology and standards recommendations. USACM recommendations enacted into law include the development and use of consensus-based standards for the construction, testing and use of computer voting system technology. As recommended by USACM, the law also authorizes grants for research and development in areas to ensure the privacy, security, accuracy, maintenance, and usability of voting systems. Unfortunately, the law fails to include other USACM recommendations such as requiring that a voter-verified audit trail be one of the essential requirements for certification of new voting systems. USACM is actively working to educate policymakers about the importance of voter-verifiable audit trails as the new law is implemented and new voting systems are purchased around the country.

Recognizing the concerns raised by USACM and others in the research community, Congress has refrained from creating new intellectual property rights for facts contained in databases. Since 1996, Congress has been considering whether databases need a new form of intellectual property protection. USACM has been actively working with a broad coalition of researchers, educators and consumers to help policymakers understand the critical importance of facts to the free flow of information and the public domain. USACM continues to recommend that any new database protection effort must allow "fair use" of databases comparable to that under current copyright law and permit

downstream, transformative use of facts and government produced data contained in a database.

SUMMARY OF USACM FY2003 ACTIVITIES

All of USACM's activities are posted on the recent activities and news section of the USACM web site at: <http://www.acm.org/usacm/>. In chronological order, USACM FY 2003 activities included the following actions:

JULY 2002

(July 15, 2002) USACM sent a letter to Congress recommending that NIST have a role in providing guidance in the establishment of information assurance in each phase of the election process. USACM further recommended additional research and development on the security of computers, computer networks, computer data storage used in voting products and systems, as well as new methods to detect and prevent fraud. To review the USACM letter, see:

<http://www.acm.org/usacm/Letters/ElectionReformConferees.htm>

(July 11, 2002) USACM signed an amicus brief to the California Supreme Court in the DVD-Copy Control Association (DVCCA) v. Bunner case. The brief seeks that the Court reaffirm the longstanding principle of trade secret law that reverse engineering of mass-marketed products is a lawful way to acquire a trade secret. In addition, the brief argues that the Court should repudiate the notion that an anti-reverse engineering clause in a mass-market license can override the right to reverse engineer. In its interest statement attached to the brief, USACM states that reverse engineering is critical for systems interoperability and facilitates the research and testing of information processing systems and the development of programs that impede the spread of viruses and other kinds of malicious software. Finally, the USACM interest statement concludes that restrictions on reverse engineering would have serious stifling consequences for software engineers, the computing community, and the overall security of the information infrastructure and electronic commerce. To review the brief signed by USACM, see: <http://www.acm.org/usacm/Briefs/bunneramicusbrief1.pdf>

(July 1, 2002) USACM added its support to a legal challenge to extending duration of copyrights by signing an Amici Curiae brief in support of the petitioners in the U.S. Supreme Court's consideration of the Eldred v. Ashcroft challenge to the Copyright Term Extension Act (CTEA), a U.S. law enacted in 1998. The brief signed by USACM argues that the CTEA extends the term of copyright protection in a manner that harms the public domain. USACM's contribution to the brief included a description of the evolution of computer software development and the potential damaging affects of CTEA on continued innovation of software and digital computing. In January of 2003, the Court ruled 7 to 2 against the petitioners. To review the brief signed by USACM, see: <http://www.acm.org/usacm/LegalAction/eldredv.ashcroftambrief.pdf>

AUGUST 2002

(August 20, 2002) USACM and CRA (Felten, Lazowska, and Simons) jointly replied to a columnist regarding his assertion that computer science researchers may be overstating the potential chilling effect of the DMCA. In the joint letter, the authors suggest that the chilling effect on research cannot be described by the probability of a researcher's conviction on charges alone. The authors conclude that it is disruptive to the progress of research when scientists must first consult with attorneys to determine if previously legitimate research might be in violation of the DMCA. To review the column and letter signed by USACM, see:

<http://news.com.com/2009-1081-954554.html>

SEPTEMBER 2002

(September 26, 2002) USACM submitted a letter to the House Judiciary Committee Subcommittee on Courts, the Internet, and Intellectual Property regarding the hearing entitled "Piracy Of Intellectual Property On Peer-to-Peer Networks." The USACM letter expressed the strong concerns of the computing community regarding legislation under consideration by the subcommittee entitled The P2P Piracy Prevention Act (H.R. 5211). As introduced, the legislation would permit copyright holders to engage in "self-help" measures to thwart the sharing of digital files through P2P computer networks by creating a "safe harbor" from existing anti-hacking laws. USACM cautioned lawmakers that the legislation legitimizes a variety of questionable acts that violate professional and ethical standards of computing. USACM also outlined a number of additional concerns with H.R. 5211, including its potential impact on the functioning of the Internet, unintended collateral damage and costs to innocent Internet users, and over-reaching affects on individuals who are not under the jurisdiction of U.S. laws. To review the USACM letter, see:

<http://www.acm.org/usacm/Letters/P2P.htm>

(September 20, 2002) USACM sent letters to Congress recommending the establishment of consensus-based standards for the construction, testing and use of computer voting system technology based on the NIST Common Criteria (CC) to ensure the privacy, security, accuracy, maintenance, and usability of voting systems. USACM further recommended additional research and development on the security of computers, computer networks, computer data storage used in voting products and systems, as well as new methods to detect and prevent fraud. To review the USACM letters to Congress on electronic voting standards, see:

<http://www.acm.org/usacm/Issues/EVoting.htm>

(September 9, 2002) In support of reverse engineering and fair use, USACM joined a diverse coalition of individuals and groups in signing an Amici Curiae brief that was filed with the Federal Circuit Court of Appeals supporting a rehearing of *Bowers v. Baystate Technologies*. In an earlier decision on the case, the panel ruled that the terms of a shrinkwrap license forbidding reverse engineering are enforceable and are unlimited by exceptions and limitations to copyright law. Of particular interest to USACM, the brief argues that software reverse engineering is critical to innovation. In addition, the brief

concludes that the panel's ruling undermines exceptions and limitations in copyright law, including the first sale doctrine and fair use. Update: On June 16, 2003, the Supreme Court granted writ of certiorari, the judgment was vacated, and the case was remanded to the U.S. Court of Appeals for the Ninth Circuit.

To review the brief signed by USACM, see:

<http://www.acm.org/usacm/Briefs/bowersVbaystatebrie.htm>

OCTOBER 2002

(October 31, 2002) USACM sent a letter to Representatives Rick Boucher (D-VA) and John Doolittle (R-CA) regarding [H.R. 5544, the Digital Media Consumers' Rights Act](#) of 2002. The legislation amends the Digital Millennium Copyright Act (DMCA) by allowing consumers and researchers to access hardware and software products that enable non-infringing uses of copy-protected work and permits the development of circumvention technology. Of particular interest to USACM, technologists would not be subject to DMCA penalties for conducting research or testing copyright protection systems, security software, or software engineering tools under H.R. 5544. To review the USACM letter to Congressman Boucher, see:

<http://www.acm.org/usacm/Letters/BoucherDMCABill.htm>

(October 28-31, 2002) The Internet Corporation for Assigned Names and Numbers (ICANN) held a four-day meeting in Shanghai. Kathryn Kleiman, USACM member and Director of ACM's Internet Governance Project (ACM-IGP) attended the meeting. The meeting's agenda included consideration of major changes to ICANN's structure and procedures, and discussion of reforms to the domain name registration process. Most of the meeting was devoted to a set of bylaw, structural and procedural changes called the "Evolution and Reform" documents. During the meeting's public forum, ACM-IGP voiced concerns about the elimination of direct elections for half of the ICANN Board seats by the public, the continuing broad and loosely defined scope of ICANN's mission statement, and the adoption of extremely short, mandatory timelines for domain name policy development which make participation largely impossible for constituencies and organizations without fulltime paid legal staffs. For a brief report of the ICANN meeting provided by Kathryn Kleiman, see:

http://www.acm.org/usacm/IG/October_2002_Meeting_Report.htm

NOVEMBER 2002

(November 12, 2002) USACM issued a joint media statement with CRA on the passage of the Cyber Security Research and Development, legislation that authorizes the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST) to spend \$903 million over the next five years on systems security research, education, and related programs. The law directs the NSF to establish centers for computer and network security research at universities and provide doctoral fellowships. In addition, NIST will create university-industry partnerships for cyber security research. Finally, as recommended by USACM and CRA in testimony before the House and Senate, the law includes additional funds to increase the number of faculty qualified to

teach college-level cyber-security courses (\$25 million). To review the joint CRA and USACM media statement, see:

http://www.acm.org/usacm/Press/USACM_CRA_PR_HR3394.htm

DECEMBER 2002

(December 18, 2002) USACM filed comments with the Copyright Office of the Library of Congress as part of a rulemaking proceeding mandated by the Digital Millennium Copyright Act (DMCA). In submitted comments, USACM advised the Copyright Office that the anticircumvention provisions of the DMCA have substantial negative impacts on the conduct of basic research in the U.S., particularly in cryptography and other computer security areas. The provisions interfere with many legal, non-infringing uses of digital computing and prevent scientists from circumventing access technologies in order to recognize shortcomings in security systems. USCAM further commented that the DMCA is fundamentally flawed by criminalizing multi-use technologies rather than penalizing infringing behavior. Finally, USACM concluded that literary works [including computer programs and databases] protected by access control mechanisms that fail to permit access to recognize shortcomings in security systems, to defend patents and copyrights, to discover and fix dangerous bugs in code, or to conduct forms of desired educational activities, should be exempted from the DMCA's prohibition on circumvention of access controls. To review USACM comments on the DMCA submitted to U.S. Copyright Office, see:

<http://www.copyright.gov/1201/2003/comments/040.pdf>

JANUARY 2003

(January 30, 2003) USACM sent a letter to the American Bar Association's (ABA) House of Delegates concerning the Uniform Computer Information Transactions Act (UCITA). USACM and many professionals in the software engineering industry consider UCITA to be a threat to the professionalism of their work, the safety of the public, the quality of software development. In particular, the USACM letter to the ABA group expressed concerns that UCITA enables software producers to: limit their legal accountability for defective products; ban reverse engineering by means of contractual use restrictions in many instances; place software vulnerabilities in a purchaser's software; and, ban users from comparing software or publicizing information about un-secure products. USACM urged the ABA group to table consideration of UCITA until a thoughtful, balanced revision is made that respects the concerns of all segments of the population. To review the USACM letter to ABA regarding UCITA, see:

<http://www.acm.org/usacm/Letters/ucitaABA.htm>

(January 23, 2003) USACM sent a letter to Congress recommending a rigorous independent review of the U.S. Government's Total Information Awareness (TIA) program. While recognizing that research and development in data-mining, fusion methods and privacy enhancing technologies are needed and welcomed, USACM raised concerns with the serious security, privacy, economic, and personal risks associated with the development of a vast database surveillance system such as TIA. USACM noted that

a thorough examination of the technical feasibility and practical reality of the entire program should be conducted and offered to assist in such a review. To review the USACM letter regarding TIA, see:

http://www.acm.org/usacm/Letters/tia_final.html

FEBRUARY 2003

(February 17, 2003) USACM endorsed a statement supporting the inclusion of a voter Verified audit trail capacity in direct recording electronic (DRE) voting machines used to facilitate local, state, and national elections. Spearheaded by USACM member David Dill, the resolution recognizes that the voter verified audit presents the best opportunity for accuracy in the tabulation of election results. The resolution is consistent with USACM efforts to educate members of Congress, local elected officials, and the media regarding the vulnerabilities of certain computer technologies when applied to electronic voting. To review the Dill resolution on electronic voting endorsed by USACM, see: <http://verify.stanford.edu/dill/EVOTE/statement.html>

(February 10, 2003) USACM joined a diverse collection of library, higher education, and computing groups in submitting an amicus brief with the Supreme Court in *Dastar v. Twentieth Century Fox*. The brief explains to the court the potential damaging impact of reversing the Constitutionally based policy of leaving facts in the public domain where there can be incorporated into new works. Of particular concern to the research and education community, an earlier ruling by the Ninth Circuit Court regarding Section 43(a) of the Lanham Act could impact the Supreme Court's 1991 decision in *Feist v. Rural Telephone*. In that landmark case, the Supreme Court interpreted the U.S. Constitution as prohibiting copyright protection for the facts contained in a database. Update: The U.S. Supreme Court issued its [opinion](#) in *Dastar v. Twentieth Century Fox* on June 2, 2003. By ruling in favor of *Dastar*, the Court limits the ability of copyright holders to use the Lanham Act as a super-copyright law. To review the *Dastar* brief signed by USACM, see: <http://www.acm.org/usacm/Briefs/DastarCorpBrief.htm>

(February 9, 2003) Members of the USACM Executive Committee met in Washington, D.C., with ACM leadership, staff and other participants to review 2002 activities and discuss policy objectives for 2003.

MARCH 2003

(March 28, 2003) USACM joined the Congressional Internet Caucus Advisory Committee (ICAC). The organization is a diverse group of public interest, non-profit and industry groups working to educate Congress and the public about important Internet-related policy issues. By joining the ICAC, USACM pledged to support the goals of the effort, including: promoting the growth and advancement of the Internet; providing a bipartisan forum for Internet concerns to be raised; promoting the education of Members of Congress and their staffs about the Internet; promoting commerce and free flow of information on the Internet; advancing the United States' world leadership in the digital

world; and maximizing the openness of and participation in government by the people. As a member of ICAC, USACM will be called on to provide expertise on Internet technology policy, participate in panel discussions, and submit white papers on various Internet-related policy issues. For more information about the ICAC, see:

<http://www.netcaucus.org/advisory/>

(March 27, 2003) In a letter to the Director of the White House Office of Science and Technology Policy (OSTP), USACM recommends that a clear and concise policy framework for controlling access to research and information be maintained as additional steps are enacted to enhance homeland security. USACM and the research community has become increasingly concerned with government efforts that would create new controls or restrictions on access to research and information. Actions of concern include: creating new categories of classification; requiring pre-publication review of research results; and enacting further restrictions on foreign-born researchers that would limit participation in government research contracts and grants. USACM cautioned policymakers that erecting unworkable barriers to research threatens the strength of our universities and research enterprise, damages our nation's ability to create and disseminate knowledge, and undermines the education of our future scientific leaders. To review the USACM letter to OSTP on access to information, see:

<http://www.acm.org/usacm/Letters/OSTPaccess.htm>

(March 21, 2003) a Congressional Research Service Report on the Defense Department's controversial Total Information Awareness Program (TIA) references USACM several times. USACM experts provided input to CRS regarding the security, privacy, economic, and personal risks associated with TIA and suggested a thorough examination of the technical feasibility and practical reality of the entire program. As part of the Library of Congress, CRS provides expert advice to members of Congress and their staff on a wide range of policy and technical issues. To review the CRS report, see:

<http://www.acm.org/usacm/PDF/CRSTIAReport.pdf>

APRIL 2003

(April 29, 2003) USACM sent a letter to California's Orange County Board of Supervisors conveying concerns related to touch screen voting machines that utilize direct recording electronic (DRE) voting technology. USACM advised the Board that computers are inherently subject to programming error, equipment malfunction, and malicious tampering. Therefore, USACM recommended that any computerized voting system should provide a voter-verifiable audit trail that creates an anonymous record of each vote that could be checked for accuracy by the voter when the vote is cast, and is difficult or impossible to alter after the vote is cast. To review the USACM letter to the Board, see:

<http://www.acm.org/usacm/Letters/OrangeCounty.htm>

(April 8, 2003) USACM joined a broad coalition of groups in endorsing an Electronic Privacy Information Center letter sent to the Department of Justice (DOJ). The letter requests that the DOJ reconsider its proposed change in administrative policy regarding

panel that USACM and the computing community have found that the law prevents scientists and technologists from pursuing legitimate research related to cryptography and other computer security areas. USACM recommended changes to the DMCA law to shift the focus from legislating technology to penalizing acts of nefarious behavior so that technologists are not penalized for conducting research or for making other non-infringing uses of copyright protected materials. To review the USACM testimony of Dr. Simons, see:

http://www.acm.org/usacm/Testimony/Simons_LOC_Copyright.htm

(May 1, 2003) USACM sent a letter to the Director of the Office of Management and Budget (OMB) making recommendations on the development of privacy guidelines for e-communications between government agencies and the public. In the letter, USACM commented that individual online privacy safeguards need to go beyond simply informing the public of privacy practices of federal agency web sites. USACM made a number of recommendations that build on the Code of Fair Information Practices and the Privacy Act of 1974. To review the USACM letter and privacy recommendations to OMB, see:

http://www.acm.org/usacm/Letters/OMB_Privacy.htm

JUNE 2003

(June 27, 2003) USACM sent a letter to the Senate Judiciary Committee concerning comments at a hearing to review policy issues raised by the emergence of Peer-to-Peer (P2P) file-sharing networks. During the hearing, Senators discussed enacting an exemption for copyright owners from liability for damaging computers in an effort to thwart illegal file sharing. In the letter, USACM suggested that allowing copyright owners to intentionally damage computers in such a manner would legitimize a variety of questionable acts and produce unintended consequences harmful to the use and continued development of the Internet. USACM also pointed-out that P2P networking protocols are used for a variety of legitimate purposes that do not involve copyright infringement. Finally, USACM concluded that damaging computers could result in serious harm to innocent third parties and disrupt applications involving legitimate electronic commerce transactions and a variety of research, education, free speech, health care, and other noncommercial activities. To review the USACM letter to the Senate Judiciary Committee, see:

http://www.acm.org/usacm/Letters/Hatch_P2P.htm

(June 9,2003) USACM sent a letter to Florida Governor Jeb Bush concerning a broad state measure that restricts the use of certain computing technology in an effort to provide additional legal protections for digital transmission of music, video and similar content. The state measure, [S.B. 1078](#), is based on a model law drafted and supported by the entertainment industry. Many observers have dubbed such legislation "super DMCA," a reference to the Digital Millennium Copyright Act. In the letter, USACM suggested that overly broad measures targeting acts of copyright infringement might impact much of the use of computers and the Internet, including legitimate efforts to provide good computer security and to conduct research. USACM encouraged policymakers to eschew laws that

restrict technology instead of penalizing infringing behavior. Update: On June 24, the Governor of Florida signed S.B. 1078 into state law. To review the USACM letter to Florida Governor Bush, and other state leaders consider similar measures, see: http://www.acm.org/usacm/Letters/Florida_DRM_Bill.htm

For more information regarding the activities of USACM, please see <http://www.acm.org/usacm/> or contact the ACM Policy Office in Washington, D.C., at 202.659.9711 or usacm_dc@acm.org. To receive a monthly summary of USACM activities, please subscribe to the ACM Washington Update by sending an e-mail to listserv@acm.org with "subscribe WASHINGTON-UPDATE" (no quotes) in the body of the message.

