ABOUT THE TASK FORCE

In 2005, the Brennan Center convened a Task Force of internationally renowned government, academic, and private-sector scientists, voting machine experts and security professionals to conduct the nation's first systematic analysis of security vulnerabilities in the three most commonly purchase electronic voting systems. The Task Force spent more than a year conducting is analysis and drafting *The Machinery of Democracy: Protecting Elections in an Electronic World.* During this time, the methodology, analysis, and text were extensively peer reviewed by the National Institute of Standards and Technology ("NIST"). The members of the Task Force are:

CHAIR

Lawrence D. Norden, Task Force Chair and Report Editor, *Brennan Center for Justice*
Mr. Norden is an Associate Counsel with the Brennan Center, working in the areas of voting technology, voting rights, and government accountability. For the past year, Mr. Norden has led the Brennan Center's voting technology assessment project. He is the lead author of *Critical Perspectives on Voting Technology: Security, Accessibility, Usability, Cost* (Brennan Center forthcoming 2006)) and a contributor to Routledge's forthcoming *Encyclopedia of American Civil Liberties*. Mr. Norden is a graduate of the University of Chicago and the NYU School of Law. Mr. Norden serves as an adjunct faculty member in the Lawyering Skills and Legal Writing Program at the Benjamin N. Cardozo School of Law.

PRINCIPAL INVESTIGATOR

Eric L. Lazarus, Principal Investigator**,** *DecisionSmith*
Mr. Lazarus is a 22-year veteran in the field of technology evaluation and the president of DecisionSmith, a consulting firm that builds computer systems that perform decision support and data warehouse functions and/or involve complex workflow. He was the technical lead on the Recommendations of the Brennan Center for Justice and the Leadership Conference on Civil Rights for Improving Reliability of Direct Recording Electronic Voting Systems published in 2004 and continues his analysis of election technology threats currently with researchers at Stanford under an NSF grant. Eric is also the producer and host of a new internet "radio" program called www.PracticalElectionAdministration.org which focuses on developing and popularizing best practices in election management.

GOVERNMENT EXPERTS

David Jefferson, Ph.D., *Lawrence Livermore National Laboratory and Chair of the California Secretary of State's Voting Systems Technology Assessment and Advisory Board*
Dr. Jefferson is a computer scientist at the Center for Applied Scientific Computing at the Lawrence Livermore National Laboratory ("LLNL"). Before joining LLNL he spent seven years in Silicon Valley at the DEC/Compaq/HP Labs doing Internet-related work, specializing in election security. He is a former Professor of Computer Science at UCLA. Dr. Jefferson serves on the board of directors of the California Voter Foundation. He holds a

B.S. in Mathematics from Yale University, and a Ph.D. in Computer Science from Carnegie-Mellon University.

John Kelsey, Ph.D., *NIST*
Dr. Kelsey is a cryptographer at NIST with research interests in cryptanalysis and design of symmetric crypto primitives (block and stream ciphers, hash functions), random number generation, electronic voting, chaining modes, key derivation functions, side-channel attacks, and cryptographic protocols. Before working at NIST, he worked at Certicom and Counterpane Internet Security.

Rene Peralta, Ph.D., *NIST*
Dr. Peralta is a former faculty member of Yale University's Department of Computer Science. He is interested in cryptology, security, and electronic commerce. He joined NIST in 2005.

Professor Ronald Rivest *MIT and Technical Guidelines Committee, Election Assistance Commission*
Prof. Rivest is the Viterbi Professor of Computer Science in MIT's Department of Electrical Engineering and Computer Science. He is a member of MIT's Computer Science and Artificial Intelligence Laboratory, a member of the lab's Theory of Computation Group, and a leader of its Cryptography and Information Security Group. He is a founder of RSA Data Security and also a member of the Election Assistance Commission's Technical Guidelines Committee. Prof. Rivest is a member of the National Academy of Engineering, the National Academy of Sciences, and is a Fellow of the Association for Computing Machinery, the International Association for Cryptographic Research, and the American Academy of Arts and Sciences. In 2005, he received the MITX Lifetime Achievement Award. He received a B.A. in Mathematics from Yale University in 1969, and a Ph.D. in Computer Science from Stanford University in 1974. Prof. Rivest also has an honorary degree from the University of Rome.

ACADEMIC EXPERTS

Professor Matt Bishop, *University of California at Davis*
Prof. Bishop is on the faculty of the Department of Computer Science at the University of California at Davis. He is one of the co-directors of the Computer Security Laboratory there. His main research area is the analysis of vulnerabilities in computer systems, especially their origin, detection, and remediation. His textbook, *Computer Security: Art and Science*, was published in December 2002 by Addison-Wesley-Longman. Prof. Bishop also teaches software engineering, machine architecture, operating systems, programming, and computer security. He received his Ph.D. in Computer Science from Purdue University in 1984.

Professor David Dill, *Stanford University*
Prof. Dill is a Professor of Computer Science and, by courtesy, of Electrical Engineering at Stanford University. He has been on the faculty at Stanford since 1987. He is a member of the boards of the Verified Voting Foundation and VerifiedVoting.org. In 2004, he received the Electronic Frontier Foundation's "Pioneer Award" for "for spearheading and nurturing

the popular movement for integrity and transparency in modern elections." Prof. Dill's Ph.D. thesis, *Trace Theory for Automatic Hierarchical Verification of Speed Independent Circuits* was named a Distinguished Dissertation by the Association for Computing Machinery ("ACM") and was published by M.I.T. Press in 1988. He was named a Fellow of the ACM in 2005 for contributions to system verification and for leadership in the development of verifiable voting systems. Prof. Dill holds an S.B. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology, and an M.S and Ph.D. from Carnegie-Mellon University.

Professor Douglas W. Jones, *University of Iowa*
Prof. Jones is a Professor of Computer Science at the University of Iowa. In the past, he served on, as well as chaired, the Iowa Board of Examiners for Voting Machines and Electronic Voting Systems. He has consulted with the ACLU (Illinois Chapter), Miami-Dade County, the Arizona Senate Government Accountability and Reform Committee, the Brennan Center for Justice, and several other organizations on voting related issues. Prof. Jones made significant contributions to the 2006 revision of New York's voting system standards, and he served on the election observation mission for the 2005 presidential election in Kazakhstan, for the Office of Democratic Institutions and Human Rights of the Organization for Security and Cooperation in Europe. Prof. Jones received his M.S. and Ph.D. in Computer Science from the University of Illinois at Urbana Champaign and his B.S. in Physics from Carnegie-Mellon University.

Joshua Tauber, Ph.D., *formerly of the Computer Science and Artificial Intelligence Laboratory at MIT,*
Dr. Tauber received his Ph.D. from MIT in February 2005. At MIT, Tauber was part of Professor Nancy Lynch's Theory of Distributed Systems research group. While a member of Professor Frans Kaashoek's Parallel and Distributed Operating Systems research group, he earned a Master of Science in Electrical Engineering and Computer Science in May 1996. Before attending MIT, he was a software engineer with the Mobios Project at the Matsushita Information Technology Laboratory (now known as PINTL).

Professor David Wagner, *University of California at Berkeley*
Prof. Wagner is an Assistant Professor of Computer Science at the University of California, Berkeley and a well-known researcher in cryptography. He participates in the Team for Research in Ubiquitous Secure Technology ("TRUST") and A Center for Correct, Usable, Reliable, Auditable, and Transparent Elections ("ACCURATE"). In the past, he was a co-founder of the ISAAC research group. Prof. Wagner received an A.B. in Mathematics from Princeton University in 1995, an M.S. in Computer Science from Berkeley in 1999, and a Ph.D. in Computer Science from Berkeley in 2000.

Professor Dan Wallach, *Rice University*
Prof. Wallach is a faculty member at Rice University. He was one of the founding members of Princeton's Secure Internet Programming Laboratory which was responsible for identifying and publicizing a number of flaws in commercial Java implementations. Prof. Wallach was also part of the Java group at Netscape and helped design and implement Netscape's "stack inspection" security architecture. His current research interests focus on

the security of Java environments and the general issues that arise in the secure execution of untrusted mobile code. Prof. Wallach received his B.S. in Electrical Engineering and Computer Science from the University of California, Berkeley and his M.A. and Ph.D. from Princeton University.

PRIVATE SECTOR EXPERTS (COMMERCIAL AND NON-PROFIT)

Georgette Asherman, *independent statistical consultant, founder of Direct Effects*
Ms. Asherman is an independent statistical consultant. She has worked as a professional statistician for over 12 years in industry and government. Her areas of expertise include study design, quality management, and research data analysis. She is the founder of Direct Effects, a firm focused on results-driven analytic and data services. She holds an M.S. in statistics from Rutgers University and a B.A. in economics from Cornell University.

Lillie Coney, *Electronic Privacy Information Center*
Ms. Coney is Associate Director with the Electronic Privacy Information Center. Her issue areas include civil rights and privacy, coalition development, spectrum, census, and electronic voting. She also serves as Coordinator of the recently established National Committee on Voting Integrity. Ms. Coney also serves as the Coordinator for the Privacy Coalition, a group of over 30 organizations who share a commitment to freedom and privacy rights. Ms. Coney was the former Public Policy Coordinator for the Association of Computing Machinery. Prior to that, she served as special assistant to Rep. Sheila Jackson Lee (D-TX) on a variety of issues ranging from energy and information technology policy, to election reform, to education policy.

Jeremy Epstein, Ph.D., *Cyber Defense Agency LLC*
Dr. Epstein is Lead Analyst with Cyber Defense Agency, LLC where he is involved in several DARPA research projects, and Senior Director of Product Security at webMethods, Inc., where he is responsible for analyzing and improving the security of all products, designing security for new products, and complying with security standards. Dr. Epstein has published over 20 papers in refereed research conferences including USENIX, IEEE, and ACSAC, as well as several articles in trade magazines. He recently completed service as a member of the Virginia Legislature's special commission on electronic voting recommendations.

Harri Hursti, *independent consultant, former CEO of F-Secure PLC*
Mr. Hursti is an independent consultant and former CEO of F-Secure PLC. Mr. Hursti has worked for many years on computer graphics, databases, including government systems for the nation of Finland. In 2005, Hursti prepared a report for Black Box Voting exposing a critical flaw with Diebold Optical Scan Design. The test hack he designed has become known as the "Hursti Hack." He has just released another report with Black Box Voting exposing the vulnerabilities of the Diebold touch screen TSx.

Howard A. Schmidt, *former White House Cyber Security Advisor; Former Chief Security Officer, Microsoft and eBay*
Mr. Schmidt most recently served in the position of Chief Security Strategist for the U.S.

CERT Partners Program for the National Cyber Security Division, Department of Homeland Security. He was appointed by President Bush as the Vice Chair of the President's Critical Infrastructure Protection Board and as the Special Adviser for Cyberspace Security for the White House in December 2001. Previously, Mr. Schmidt was chief security officer for Microsoft Corp. Mr. Schmidt has been appointed to the Information Security Privacy Advisory Board to advise NIST, the Secretary of Commerce, and the Director of the Office of Management and Budget on information security and privacy issues pertaining to federal government information systems, including thorough review of proposed standards and guidelines developed by NIST.

Dr. Bruce Schneier, *Counterpane Internet Security*
Dr. Schneier, founder and CTO of Counterpane Internet Security, is one of the world's foremost security experts and author of the influential books, *Applied Cryptography*, *Secrets & Lies*, and *Beyond Fear*. His free monthly newsletter, *Crypto-Gram*, has over 100,000 readers. Dr. Schneier holds an M.S. degree in Computer Science from American University and a B.S. degree in Physics from the University of Rochester.

Matthew Zimmerman, *Electronic Frontier Foundation*
Mr. Zimmerman is a Staff Attorney of Electronic Frontier Foundation (EFF) specializing in electronic voting issues. For the 2004 election, he coordinated a team of nationwide legal volunteers who responded to election-day problems with e-voting technology for the non-partisan Election Protection Coalition. He currently heads EFF's efforts to push for regulatory reform, coordinates nationwide e-voting litigation and *amicus* support, and evaluates emerging voting technology. He is also actively involved in e-voting-related public education efforts.