

“Security Issues in Electronic Voting”

Avi Rubin
Johns Hopkins University

Abstract

Most of the states in this country are now using some form of electronic voting in public elections. However, in many cases, the machines in use were designed poorly, developed hastily and are insecure. In this talk, we will examine some of the modern voting systems, describe the pitfalls, as well as what can be done to improve things. There are some interesting scientific problems that need to be solved before fully electronic voting can be viable, if it is even possible. To that end, we received funding from the NSF to establish the ACCURATE center, headquartered at Johns Hopkins. I will describe the activities of the center and highlight several of the research projects that are ongoing. Finally, the talk will describe some of the policy and political challenges to improving election systems.

BioSketch

Dr. Aviel D. Rubin is Professor of Computer Science and Technical Director of the Information Security Institute at Johns Hopkins University. Prior to joining Johns Hopkins, Rubin was a research scientist at AT&T Labs. He is also a co-founder of Independent Security Evaluators (securityevaluators.com), a security consulting firm. Rubin is author of several books including *Brave New Ballot* (Random House, 2006) *Firewalls and Internet Security*, second edition (with Bill Cheswick and Steve Bellovin, Addison Wesley, 2003), *White-Hat Security Arsenal* (Addison Wesley, 2001), and *Web Security Sourcebook* (with Dan Geer and Marcus Ranum, John Wiley & Sons, 1997). He is Associate Editor of *IEEE Transactions on Software Engineering*, Associate Editor of *ACM Transactions on Internet Technology*, Associate Editor of *IEEE Security & Privacy*, and an Advisory Board member of Springer's *Information Security and Cryptography Book Series*. Rubin serves on the DARPA Information Science and Technology Study Group. In January, 2004 *Baltimore Magazine* name Rubin a Baltimorean of the Year for his work in safeguarding the integrity of our election process, and he is also the recipient of the 2004 Electronic Frontiers Foundation Pioneer Award. Rubin has a B.S. ('89), M.S.E ('91), and Ph.D. ('94) from the University of Michigan.