

AFFIDAVIT OF DOUGLAS W. JONES

1. My name is Douglas W. Jones. I am a professor of computer science and a voting technology consultant. I have been acknowledged to be a voting technology expert. This affidavit is based upon my personal knowledge and professional opinion. I submit this affidavit in support of defendants/counter-plaintiffs in *State Ex. Rel. David Yost v. National Voting Rights Institute*, Case No. C2-04-1139, in the United States District Court of the Southern District of Ohio.

Expertise in Voting Technology

2. I have been a professor of computer science at the University of Iowa since 1980. I received both my Masters of Science and my PhD in computer science from the University of Illinois in 1976 and 1980, respectively, and graduated with a Bachelor's of Science in physics from Carnegie-Mellon University in 1973.

3. I have gained considerable expertise in the area of voting technology by serving on the Iowa Board of Examiners for Voting Machines and Electronic Voting Systems since 1994, and I served as chairman of the Board from 1999 until 2003. The Iowa Board of Examiners, appointed by the Iowa Secretary of State, must examine and approve all voting machines before they can be offered for sale to county governments and election officials in Iowa.

4. I also serve as Vice President and Chief Technology Officer for the Open Voting Consortium, a non-profit organization dedicated to the development, maintenance, and delivery of open voting systems for use in public elections. I am also a founding member of the Council for Voting System Performance Rating, a group devoted to the development of objective measures of voting system performance.

5. I am a member of the National Committee of Voting Integrity, and served on the organizing committee for the Georgia Tech Research Institute Internet Voting Workshop in June 2002.

6. I am also a consultant to the Miami-Dade County Elections Department on election security and procedures.

7. Attached to this affidavit is my *curriculum vitae* containing a list of articles and other written work I have written on computer systems and operations.

8. In addition to my writing and research on computer systems and operations, I have written and published extensively on issues related to voting technology, including the following articles: "Misassessment of Security in Computer-Based Election Systems," *Cryptobytes*, 7, 2 (Fall 2004), pp. 9-13; "Auditing Elections," *Communications of the Association for Computing Machinery*, 47, 10 (Oct. 2004), pp. 46-50; "Counting Mark-Sense Ballots," <http://www.cs.uiowa.edu/~jones/voting//optical.html>, posted in 2002; "Chad, from Waste Product to Headline," <http://www.cs.uiowa.edu/~jones.card/chad.html>, published and revised in 2001. I have also published a chapter in the textbook *Secure Electronic Voting*, Gritzalis, D., ed. (2002).

9. Furthermore, I have taught a course at the University of Iowa titled Computers in Voting and Elections, and I have lectured on problems regarding voting technology used in American elections, including the use of computers in elections.

10. I have testified or presented papers on voting technology at numerous hearings: "Reliability of US Voting Systems: As Assessment in Light of Recent Changes," testimony before the Congressional Black Caucus, Oct. 7, 2004; "Voting

System Transparency and Security: The need for standard models,” before the U.S. Election Assistance Commission Hearing on Transparency and Security, National Institutes of Standards and Technology, Sept. 20, 2004; “On Optical Scanning,” DIMACS Workshop on Electronic Voting – Theory and Practice,” Rutgers University, May 27, 2004; “How Do You Know Your Vote was Counted,” University of Illinois lecture sponsored by the ACLU and NAACP, April 14, 2004; and joint presentation with the Iowa Secretary of State on the dilemmas posed by the Help America Vote Act, Iowa State Associations of Counties, March 17, 2004; “Strengths and Weaknesses of Voting Systems,” Keynote address before the Second Inter-American Meeting on Electoral Technology, Organization of American States, Panama City, Panama, March 1, 2004; “How Safe is our Voting System,” Cornell College, Jan. 8, 2004; “Why Trustworthy Voting Systems Require Institutionalized Distrust,” First Symposium on Building Trust and Confidence in Voting Systems, National Institutes of Standards and Technology, Dec. 10, 2003; “The Diebold AccuVote TS Should be Decertified,” Panel Discussion on Electronic Voting, 12th USENIX Security Symposium, Aug. 6, 2003; “E-Voting: Are our Defenses Adequate to Defend Citizens’ Rights?” International Telecommunication Union Workshop on Challenges, Perspectives, and Standardization Issues in E-Government,” Geneva, Switzerland, June 6, 2003; “Human Factors in Voting Technology: An Ethical Response,” Council on Governmental Ethics Laws,” Ottawa, Canada, Sept. 30, 2002; “Voting System Standards: Work that Remains to be done,” hearing before the Federal Election Commission, April 17, 2002; “End-to-End Standards for Accuracy in Paper-Based Systems,” workshop on Election Standards and Technology, Jan. 31, 2002; “Election Reform in Iowa,” National Conference on Governance, National Civic League,

Nov. 17, 2001; "Problems with Voting Systems and the Applicable Standards," Improving Voting Technology, hearing before the Committee on Science, House of Representatives, 107th Congress, May 22, 2001; "Counting Votes with Computers," keynote address to the League of Woman Voters of Johnson County, Iowa, May 16, 2001; "Evaluation Voting Technology," testimony before the U.S. Civil Rights Commission, Jan. 11, 2001; "E-Voting: Prospects and Problems," 31st annual Tau Beta Pi, Paul D. Scholz Symposium, April 13, 2000.

11. I have a patent pending before the U.S. Patent Office titled, "System for Handicapped Access to Mark-Sense Ballots," filed Aug. 23, 2002.

Election Integrity Concerns Are Raised by the Affidavit of Sherole L. Eaton

12. I have reviewed the Affidavit of Sherole L. Eaton ("the Eaton Affidavit"), the Deputy Director of the Hocking County Board of Election, as well as the letter of Congressman John Conyers to Kevin Brock, Special Agent in Charge with the FBI in Cincinnati, Ohio. In light of this information, and given my expertise and research on voting technology issues and the integrity of ballot counting systems, it is my professional opinion that the incident in Hocking County, Ohio, threatens the overall integrity of the recount of the presidential election in Ohio, and threatens the ability of the presidential candidates, their witnesses, and the counter-plaintiffs in the above-captioned action, to properly analyze, inspect, and assess the ballots and the related voting data from the 2004 presidential election in Ohio. It is my understanding that 41 of Ohio's 88 counties use Triad voting machines. As a result, the incident in Hocking County could compromise the statewide recount, and undermine the public's trust in the credibility and accuracy of the recount.

13. The recount of the presidential election in Ohio has been extremely well publicized, and certainly every county Board of Election was aware of the pending recount. By allowing a representative of Triad GSI to unilaterally access the voting machines, without anyone notifying the candidates seeking the recount and providing them with the opportunity to be present for any modification of the tabulator, undermines the fundamental right of all parties involved in an election to observe the handling of the ballots. It is my professional opinion that this right must be extended to the preparation of the machinery that tabulates ballots unless it can be shown by the election administration that such preparation cannot have any impact on the tabulation.

14. It may also be a violation of Ohio Revised Code 3505.32(c), which requires that such interaction with voting equipment be conducted in the presence of the Board of Election and anyone entitled to witness the official canvass of the ballots.

15. The Eaton Affidavit states that the Triad representative stated that he could “put a patch on and fix it.” This assertion, and its wording, are both troubling. The reported justification for working on the voting machine in the first place was a dead battery. If one is simply replacing a dead battery on a voting machine, there is no need to patch anything; “patching” suggests that there is a more serious problem with the machine than merely a dead battery, particularly in light of the pending recount. In general, the word “patch” used in the context of computer systems refers to changes to the software, and it is generally the case that state election authorities must approve all such changes and that the counties are responsible for assuring that any patching involves only approved software. The Eaton Affidavit does not suggest such oversight.

16. The Eaton Affidavit allows that the Triad representative may have worked

on the voting machine without any supervision by someone on the Hocking County Board of Election and without recount witnesses. The Eaton Affidavit states that the Triad representative worked on the machine for at least two hours. As a general rule, the tabulating systems room of a voting office should be viewed as a sensitive secure area. No one should have unsupervised access to ballots, official election records, or the machinery used to perform the official tabulation or recount of the ballots. This is especially critical when there have been serious questions raised about voting irregularities and the accuracy or integrity of the election itself, as have been raised in Ohio by plaintiffs and others.

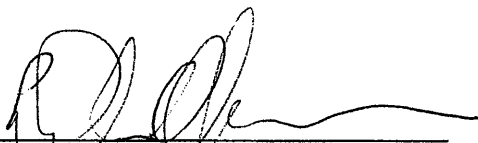
17. According to the Eaton Affidavit, the Triad representative asked Ms. Eaton which precincts and the number of precincts were going to be recounted. The identity of the precincts to be recounted should be kept a guarded secret until the very last minute before the official recount begins, to avoid the possibility of (as well as the appearance of) someone fixing or tampering with the ballots or the tabulating system. Even the president of Triad, Brett Rapp, has told the *New York Times* today that it would be unusual for an employee of the company ask which precincts were being recounted. It is my professional opinion that there is no justifiable reason why a representative from Triad or any or other voting systems company would have any need to know which precincts were being recounted. This, too, compromises the credibility and integrity of the recount, because there is an appearance — at a minimum — of impropriety related to the recount in Hocking County.

18. Similarly, the Eaton Affidavit states that the Triad representative went back into the tabulation room, after learning of the precincts to be counted, apparently without supervision or witnesses. At a minimum, this appears to have provided the Triad representative with the opportunity to rig the system so that it would count the precinct cited (Good Hope #17) identically to the machine count after the election.

19. In light of these apparent breaches of election integrity, and given that 41 of Ohio's 88 counties use Triad voting machines — nearly half of the state — Ohio county Boards of Election should be required anew to preserve and maintain the integrity of all ballots, voting machines, records, documents, source codes, machine programs, and any related voting data, as part of their obligations to preserve such materials under both federal and state law, pursuant to 42 U.S.C. § 1974 and Ohio Revised Code §§ 3505.31 and 3506.14.


20. In this regard, no one should be permitted to access any voting machine or software for any purpose without supervision by the relevant Board of Election, without public explanation of the purpose of the access and an opportunity by any recount witness to object to such access in any appropriate forum, and without witnesses to the recount present during the duration of such access to any voting machine or software.

FURTHER, AFFIANT SAYETH NOT.



Douglas W. Jones

SWORN TO AND SUBSCRIBED before me, a notary public, on this 15 day of December, 2004.



Notary Public

