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I. INTRODUCTION

"Current law has been outpaced by the growing technological advances and must be revised."¹

New Jersey voting machine regulations have not been updated to reflect new voting technologies approved by state regulators. As a result, the fundamental right to vote is at risk. Specifically, the outdated scheme has allowed direct recording electronic (DRE) voting equipment that denies meaningful recounts in violation of state election law and the New Jersey Constitution.

Amici are civil rights, technology advocacy, and grassroots organizations who support technology development as well as election integrity and security. The Superior Court improperly dismissed appellants' suit despite exhaustive documentation that the use of DREs violates New Jersey's regulatory scheme and conflicts with basic requirements of open and transparent elections. Amici urge this court to reverse the decision of the Superior Court granting summary judgment to appellees and dismissing appellants' complaint.

Amici make two arguments. First, as officials admit, New Jersey has failed to implement any kind of regulatory or statutory structure for electronic voting in order to ensure proper testing, certification, reexamination, and recounts of elections.

¹ New Jersey Help America Vote Act (HAVA) State Plan at 24, available at:

http://www.state.nj.us/lps/elections/hava_plan.html.

Second, the need for an updated, robust regulatory structure is clear: paperless touchscreen voting technology has a long and growing record of malfunction and error that has led to the disruption of elections across the country. This underscores the immediacy and relevance of appellants' suit as well as the necessity for the relief sought therein.

II. INTEREST OF THE AMICI

Amicus Electronic Frontier Foundation ("EFF") is a donor-supported membership organization working to protect fundamental rights regardless of technology; to educate the press, policymakers, and the general public about civil liberties issues related to technology; and to act as a defender of those liberties. EFF currently has approximately 225 members in New Jersey and over 8,000 members nationwide. Among its various activities, EFF opposes misguided legislation, initiates and defends court cases preserving individuals' rights, launches global public campaigns, introduces leading edge proposals and papers, hosts frequent educational events, engages the press regularly, and publishes a comprehensive archive of digital civil liberties information on the most linked-to web sites in the world. Given the significance of the issues before the Court and the impact an adverse decision would have on EFF's mission, and on the lives of all of New Jersey's citizens, EFF seeks to have its perspective brought to the Court's attention.

Amicus American Civil Liberties Union of New Jersey ("ACLU-NJ") is a private non-profit, non-partisan membership organization dedicated to the principle of individual liberty embodied in the Constitution. Founded in 1960, the ACLU-NJ has approximately 15,000 members in the State of New Jersey. The ACLU-NJ is the state affiliate of the American Civil Liberties Union, which was founded in 1920 for identical purposes, and is composed of over 450,000 members nationwide. ACLU-NJ strongly supports ensuring voting and due process rights for all persons and is currently direct counsel in NAACP v. Harvey, Docket No. UNN-C-4-04 (Ch. Div. filed Jan. 4, 2004), wherein plaintiffs challenge the denial of voting rights to persons on probation and parole. It has also participated before this court and the New Jersey Supreme Court, as direct counsel or amicus curiae, in numerous cases involving rights guaranteed by the federal and state constitutions.

Amicus VerifiedVoting.org is a nonpartisan, nonprofit organization championing reliable and publicly verifiable elections. Founded by Stanford University Computer Science Professor David Dill, the organization supports a requirement for voter-verified paper ballots on electronic voting machines allowing voters to inspect individual permanent records of their ballots and election officials to conduct meaningful recounts as needed. Over 11,000 computer science professionals and others have signed an informal resolution in

support of more secure voting at the organization's website at www.verifiedvoting.org.

Amicus People For The American Way Foundation ("People For") is a nonpartisan citizens' organization established to promote and protect civil and constitutional rights, including the fundamental right to vote. Founded in 1980 by a group of religious, civic, and educational leaders devoted to our nation's heritage of tolerance, pluralism, and liberty, People For has over 600,000 members and other supporters nationwide and 27,884 in the State of New Jersey. People For is actively working with organizations across the country on the nonpartisan Election Protection Program, which is aimed at protecting the fundamental right to vote and have that vote be counted. One of People For's primary missions is to promote the integrity and legitimacy of the electoral process and, to that end, it believes that electronic voting machines have the potential to provide accurate, secure, and accessible voting. In light of the problems with respect to such technology, however, it believes that true auditability must be demanded in order to prevent irreparable harm to New Jersey voters.

Amicus Computer Professionals for Social Responsibility ("CPSR") is a public interest alliance of computer scientists and others concerned about the impact of computer technology, including electronic voting, on the public. CPSR began researching electronic voting in the 1980s, publishing popular and scholarly articles, making conference presentations, and

undertaking other research and educational activities related to electronic voting. CPSR maintains a web site at www.cpsr.org containing a section with information resources for the general public on voting election technology.

Amicus Voters Unite! is a national non-partisan organization dedicated to fair and accurate elections. It focuses on distributing well-researched information to elections officials, elected officials, the media, and the public; as well as providing activists with information they need to work toward transparent elections in their communities. Voters Unite!'s Internet website is at <http://www.votersunite.org>.

III. ARGUMENT

A. New Jersey Has Failed to Implement a Regulatory or Statutory Regime That Will Ensure the Protection of Fundamental Voting Rights During All Stages of the E-voting Process As Required By State Law.

"Every vote counts" only if every vote is counted, and counted accurately in a manner that can be verified later in a recount. The obligation of New Jersey election officials to ensure the accuracy and verifiability of the methods it provides for casting and counting votes is not some hollow aspiration it can ignore; rather it is a constitutional and statutory duty of the highest and most solemn order. See Gangemi v. Rosengard, 44 N.J. 166, 170 (1965) quoting Wesberry v. Sanders, 376 U.S. 1, 17 (1964) ("Other rights, even the most basic, are illusory if the right to vote is

undermined'").

To ensure the accurate counting and inclusion of each citizen's vote on technology other than DREs, New Jersey has an elaborate statutory scheme that dictates the actions local election officials must take before, during, and after an election. See N.J.S.A. 19:1-1 et seq. New Jersey requires these measures for paper ballots, optical scan systems, and lever machines in part to make possible accurate election recounts and contests, capable of confirming as thoroughly as possible that each vote has been correctly counted and included in the total.

In contrast, when it comes to DREs, New Jersey has completely failed to update its statutory or regulatory structure.

This fact is not in dispute. New Jersey officials told the federal government nearly two years ago that: "Current law has been outpaced by the growing technological advances and must be revised."² Ironically, they did so as part of a request for funding for more DREs.

Yet to date New Jersey has not adequately revised its laws or regulations. This manifest failure presents an issue of great urgency, one that requires this Court to step in before more elections are held in this dangerous posture.

In particular, New Jersey has failed to update the

² New Jersey Help America Vote Act (HAVA) State Plan at 24, available at: http://www.state.nj.us/lps/elections/hava_plan.html.

following portions of its law to reflect the purchase of DREs:

1. Certification

Under New Jersey law, before a machine can be used in an election, the machine must be certified by three examiners appointed by the New Jersey Attorney General. Yet New Jersey law still requires that one examiner be an expert in patent law and that the other two be "mechanical experts." N.J.S.A. 19:48-2. These requirements effectively prevent a meaningful expert certification when DREs are involved.

The DREs used in New Jersey, like those used elsewhere across the country, are controlled mainly by software, not mechanical gears. These systems generally consist of proprietary computer code running on a version of the notoriously insecure Windows computer operating system. To be sufficiently secure to safeguard an election, they must correctly implement complicated cryptographic functions and other computer security expertise.

DREs also include collateral technology, such as smart cards or similar devices, and the State must ensure that data is properly stored and transported within the system. Proper evaluation of DRE systems requires significant expertise not provided for by New Jersey's outdated laws.

Even if New Jersey were to include sufficiently trained computer security experts on its examiners panel, their ability to investigate the system would be limited. This is because New Jersey law does not require disclosure of the

source code for a voting machine as part of the certification process. This failure is akin to asking an examiner to evaluate the security and reliability of a car while forbidding her from opening the hood, or even more apt, to evaluate a lever voting machine without opening the back and examining the gears.

Computer source code is the set of instructions that a computer follows. Without access to this code, an examiner can only minimally test a DRE, limited to observing externally visible problems but relying overwhelmingly on the word of product vendors that internal machine operations perform and will continue to perform accurately and securely. Examiners certainly cannot test it as well as a "mechanical expert" could test a lever machine without such access.

The failure of New Jersey to update its laws to require both the disclosure and testing of DRE source code and examiner expertise in computer software and computer security renders New Jersey's certification grossly inadequate.

2. Reexamination of Voting Systems

New Jersey statutory processes for reexamining voting machines have also not been updated to reflect New Jersey's purchase of DREs. In such cases, N.J.S.A. 19:52-6.1(2) directs the appropriate election official to "remove the padded cover, remove the impounding seal, if any, and unlock the padlock on the metal cover and where necessary raise all voting machines which are to be rechecked and then read the

counters of one machine at a time.”

These instructions, designed for lever machines, are in obvious need of updating; where DREs are in use, they give no guidance to election officials, who apparently must make up a recheck procedure as they go along. For DREs in New Jersey, there are no relevant statutory or regulatory guidelines for reexamination.

The state legislature’s failure to update this portion of the law subjects this important protection to the whims of election officials; it will inevitably result in inconsistent policies across the state and will likely give rise to claims of partisan application of the law.

3. Recounts

Most importantly, New Jersey’s intricate and careful statutory scheme for recounts - with specific processes for lever machines, paper ballots and optical scan systems - contains no provision for a recount of an election held on DREs. See N.J.S.A. 19:18-1 (ballot boxes); N.J.S.A. 19:53A-8, N.J.S.A. 19:53A-14 (optical scan); N.J.S.A. 19:52-6 (lever machines).

This failure violates the right to a recount under N.J.S.A. 19:28-1. Moreover, the failure of New Jersey to even attempt to provide for a recount in an election using DREs highlights an inherent problem in these machines that New Jersey cannot solve by regulation alone: New Jersey needs to upgrade its current crop of DREs to allow for a recount as

required by New Jersey law.

New Jersey law, like most statutory recount schemes across the country, is aimed at discerning a voter's intent. Whether by viewing the paper ballot (in the case of ballot boxes and optical scan systems) or by checking the mechanics of lever machines, the goal is to determine who the voter intended to vote for.

Yet none of these methods is available in a recount using New Jersey's current DREs. Instead of allowing inspection of something that can reveal a voter's intent, a DRE can merely be instructed to print out the contents of its internal memory. But the internal memories of the DRE are not reflective of the voters' intent - indeed, in all but the most unlikely situations, the printed version of the internal memories of a DRE will be exactly the same as the machine's own report of its totals.

What was intended by the legislature to allow a recount to determine voter intentions is reduced to a reprint of the machine's internal memory. This simply does not determine whether a voter's intention was recorded correctly by the machine in the first instance - the very point of the recount procedures for paper ballots, optical scan systems and lever machines. New Jersey's recount laws need updating, but in addition, New Jersey's technologies need updating as well to comport with the mandatory recount requirement for New Jersey elections.

Even the most comprehensive procedures imaginable cannot solve the fundamental problem of recounts on the particular DREs currently in use in New Jersey. As a result, use of these DREs is fundamentally inconsistent with New Jersey's right to a recount.

B. Independent Testing Authorities Provide Insufficient Protection for New Jersey

While not required by statute or published regulation, New Jersey also requires that voting systems used in the state be approved and certified by a private, for-profit Independent Testing Authority (ITA).³ While one might be tempted to rest easier based upon this additional layer of testing, such reassurance would be misplaced. ITAs are paid by the vendors to conduct their research and treat both their testing processes and test results as confidential and proprietary to the voting machine vendor.⁴

Even election officials who rely on the certifications provided by ITAs are not allowed to access the information. As reported on the front page of the San Jose Mercury News in May 2004:

³ New Jersey Help America Vote Act (HAVA) State Plan at 24.

⁴ Documentation provided by the National Association of State Election Directors (NASED) noted that "The ITAs DO NOT and WILL NOT respond to outside inquiries about the testing process for voting systems, nor will they answer questions related to a specific manufacturer or a specific voting system from the public, the news media or jurisdictions." Testimony of Michael I. Shamos Before the Environment, Technology, and Standards Subcommittee of the U.S. House of Representatives' Committee on Science (June 24, 2004) at <http://www.house.gov/science/hearings/ets04/jun24/shamos.pdf>.

California Secretary of State Kevin Shelley had a simple question: Had a new electronic voting machine been approved by an independent testing lab? State law requires such approval before the device could be used by California voters. It guaranteed the machines counted votes accurately and would work reliably during an election. As the state's top election official, Shelley figured he could get a quick answer. He figured wrong. Wyle Laboratories of El Segundo refused to discuss the status of its testing with him . . . The information was proprietary [to the election system vendor], Wyle said.⁵

Currently only three voting machine ITAs exist, two for software and one for hardware. Neither federal nor state oversight of the ITA processes exists. Perhaps predictably, and as appellants pointed out in their Superior Court briefs, separate independent research on the security of voting systems conducted by the Johns Hopkins/Rice team,⁶ the State of Maryland,⁷ and others confirms that ITAs are not performing

⁵ Elise Ackerman, "Lax Controls Over E-Voting Testing Labs," San Jose Mercury News at A1 (May 30, 2004) http://www.mercurynews.com/mld/mercurynews/news/local/states/california/northern_california/8797832.htm.

⁶ Aviel Rubin et al., Analysis Of An Electronic Voting System, IEEE Symposium On Security And Privacy 2004, IEEE Computer Society Press, May 2004 (commonly known as the "Hopkins Report") at <http://avirubin.com/vote.pdf> (last visited July 1, 2005).

⁷ Science Applications International Corporation ("SAIC"), Risk Assessment Report: Diebold AccuVote-TS Voting System and Processes, Sep. 2, 2003, at http://www.dbm.maryland.gov/dbm_publishing/public_content/dbm_search/technology/toc_voting_system_report/votingsystemreportfinal.pdf; RABA Technologies, LLC, Trusted Agent Report: Diebold AccuVote-TS Voting System, Jan. 20, 2004, at http://www.raba.com/press/TA_Report_AccuVote.pdf.

their duties adequately.

As a technical advisor to the California Secretary of State noted, in the Mercury News article:

"We can't trust the ITA process," said David Jefferson, a computer scientist at the Lawrence Livermore National Laboratory, "The record shows that these systems have gotten through the ITA testing with embarrassing security vulnerabilities in them."

Even one of the country's leading proponents of DREs, Professor Michael Shamos of Carnegie Mellon University, agrees that current ITA processes are grossly insufficient. Speaking before a Congressional panel in 2004, he declared: "I am here today to offer my opinion that the system we have for testing and certifying voting equipment in this country is not only broken, but is virtually nonexistent. It must be re-created from scratch or we will never restore public confidence in elections."⁸

The lack of sufficient technical and security examination of DREs by the State of New Jersey, added to the complete inadequacy of the ITA process, leaves New Jersey voters with no assurance that the machines to which they are entrusting their votes are functioning correctly and protected from malicious attack.

⁸ Testimony of Michael I. Shamos Before the Environment, Technology, and Standards Subcommittee of the U.S. House of Representatives' Committee on Science (June 24, 2004) at <http://www.house.gov/science/hearings/ets04/jun24/shamos.pdf>.

C. Electronic Voting Machines Have A History of Malfunctioning

The need to update New Jersey's regulatory structure and require voting technology that allows recounts is not merely abstract. Serious problems have arisen in connection with the DRE voting systems used in elections in New Jersey and nationwide.

Across the country, election officials and voters alike have discovered that DREs introduce a broad range of problems and subject elections to substantial risk of error through machine malfunctions, mistakes or negligence in the operation of these machines by electoral officials, or intentional mischief by malicious persons. The history of problems with these new technologies further supports the relief sought by appellants.

Appellants have exhaustively detailed the problems with voting machines across the country. Such problems cannot be understated. Reports from the November 2004 election and subsequently have confirmed that serious problems with the technology and related procedures persist, problems that continue to undermine the confidence of the electorate. The following are but a few examples:

Miami-Dade County, Florida

On a one-item ballot, computer errors caused almost 500 votes to be recorded as completely blank - that is, thrown out - because voters failed to press the red "VOTE" button. The machines were supposed to count such votes anyway, but the software didn't save the votes. The same software was used in five

other municipal elections in the previous year, casting the results of those elections into doubt.⁹

Carteret County, North Carolina

Unilect claimed that its paperless voting machines would store 10,500 votes, but they only store 3,005. After the first 3,005 voters, the machines accepted -- but did not store -- the ballots of 4,530 people in the 2004 Presidential election.¹⁰

Franklin County, Ohio

A Danaher ELECTronic 1242 computer error with a voting machine cartridge gave President Bush 3,893 extra votes in a Gahanna precinct. Records show only 638 voters cast ballots in that precinct.¹¹

Mahoning County, Ohio

Twenty to thirty voting machines were reported to be recording votes for one candidate as votes for another. The machines had to be recalibrated in the middle of the election. Another twelve machines froze during voting and had to be reset.¹²

Snohomish County, Washington

Voters in at least four polling precincts in Snohomish County said that they encountered problems with the Sequioia electronic voting machines. When they touched the screen to vote for a candidate, an indicator showed they had selected the opposing

⁹ Tere Figueras Negrete and Noaki Schwartz, Voting Glitches Found In 6 Recent Elections, Miami Herald, March 31, 2005, at <http://www.miami.com/mld/miamiherald/news/local/11271837.htm>.

¹⁰ Charlotte Observer, Computer Loses More Than 4,000 Early Votes In Carteret, November 4, 2004, at <http://www.charlotte.com/mld/observer/news/local/10099907.htm>.

¹¹ Akron Beacon Journal, Computer Error At Voting Machine Gives Bush 3,893 Extra Votes, November 5, 2004, at <http://www.ohio.com/mld/beaconjournal/news/state/10103910.htm?1c>.

¹² Vindicator, Errors Plague Voting Process In Ohio, PA., November 3, 2004, at <http://www.vindy.com/basic/news/281829446390855.php>.

candidate. In some instances, it took at least four attempts before the indicator showed the correct candidate.¹³

Craven County, North Carolina

Votes were counted twice for nine out of 26 precincts in the county. A computer override was supposed to correct such a problem, but it failed. When the mistake was corrected, it changed the outcome for one of the races.¹⁴

Unwilling to institute the kinds of necessary, required protections that would help safeguard the votes of its citizens, the State continues to use New Jersey elections as a high-risk testing ground for this unproven technology.

IV. CONCLUSION

The problems caused by insecure and unreliable DREs continue. By themselves, these troubling problems support a determination that New Jersey should not use these machines for upcoming elections. Yet New Jersey's utter failure to build an appropriate testing, reexamination and recount process for DREs sets it apart from all of the other states that have used and continue to use DREs. It puts New Jersey far behind states like New Mexico and Florida, which have adopted at least some regulatory structure to support their use of DREs and even further behind states like California and

¹³ King5 News, Scattered Reports of Voters Being Blocked and Machine Malfunctions, November 2, 2004, at http://www.king5.com/topstories/stories/NW_110204ELBelectronicvotingproblemsLJ.1aac5fda.html.

¹⁴ Sue Book, Election Problems Due To a Software Glitch, Sun Journal. November 5, 2004, at <http://www.newbernsj.com/SiteProcessor.cfm?Template=/GlobalTemplates/Details.cfm&StoryID=18297&Section=local>.

Maryland which have taken some steps to independently test and shore up their systems. Appellants, on behalf of New Jersey voters, deserve an opportunity to make this strong case.

For all of these reasons, amici respectfully request that the Court reverse the trial court's decision and reinstate appellants' complaint.

Respectfully submitted,

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