

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF OHIO  
EASTERN DIVISION**

<b>EFFIE STEWART, et al.,</b>	:	
<b>Plaintiffs</b>	:	<b>Case No.: 5:02CV2028</b>
<b>v.</b>	:	<b>Judge David Dowd, Jr.</b>
<b>J. KENNETH BLACKWELL, et al.,</b>	:	
<b>Defendants</b>	:	
	:	

**PLAINTIFFS' POST-TRIAL BRIEF**

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## I. INTRODUCTION

Since the 2000 election, the fundamental flaws of punch card and other non-notice voting technology have become common knowledge. In November and December of 2000, images of election officials squinting at ballot cards attempting to determine a voter's intent covered the television screens and newspaper pages throughout the country. Subsequently, in Florida, Georgia, California, Illinois, and other states, public officials decertified the punch card ballot in favor of more current technology that notifies voters if they have cast residual ballots. By the 2004 general election, Ohio was one of the few states that relied so heavily on the very same equipment that led to the confusion and breakdown of public confidence in the 2000 election. Prior to the November 2004 election, Secretary of State Blackwell publicly expressed concern that the continued use of punch card equipment as the state's primary voting system threatened the state with a host of serious problems. See exhibit 24 (Letter of J. Kenneth Blackwell to Honorable Doug White), at 3 (expressing concern that continued use of punch card equipment might lead to a 2000 "Florida-like calamity.").

Now that the 2004 election is over, it is clear that in many respects Secretary Blackwell's warning was well-founded. According to official data from the Ohio Secretary of State's office, the level of residual voting in the 2004 presidential election was nearly identical to that of the 2000 presidential election: in 2000, Ohio voters cast nearly 96,000 residual votes, and in 2004, approximately 94,000 did. Notwithstanding the considerable efforts of elections officials to educate voters about the problems and pitfalls of the punch card ballot, significant numbers of voters continue to fall into the trap of this unreliable and outdated form of voting technology. Had the margin on the morning of November 3, 2004 been 36,000 rather than 136,000,

Ohio indeed would have faced a "Florida-like calamity."

In this action, Plaintiffs seek declaratory and injunctive relief from Defendants' creation and utilization of a non-uniform, unequal, and dual voting system. By certifying and operating various voting systems that favor or disfavor voters on the basis of their residence – and more specifically based on the happenstance of whether they live in a county using unreliable voting equipment – the Defendants are violating the Equal Protection Clause of the Fourteenth Amendment, which protects Plaintiffs' fundamental right to have their votes count on an equal basis with those cast by other citizens. It bears emphasis that the thrust of this prong of Plaintiffs' complaint is not that the punch card ballot is unconstitutional *per se*; nor is it that Ohio voters have a constitutional right to vote on any particular kind of equipment. Rather, Plaintiffs contend that Defendants, by certifying and employing notice voting systems in some counties and non-notice systems in others, are illegally favoring some voters over others on the basis of residency. Plaintiffs also contend that Defendants violate Plaintiffs' rights under the Due Process Clause of the Fourteenth Amendment to a rational and non-arbitrary system for registration and tabulation of their votes.

Finally, through both lay and expert testimony, the African American Plaintiffs have demonstrated that there is a racial disparity in whose votes are not counted due to the inherent flaws of non-notice voting technology. Therefore, the certification and use of this technology by the State of Ohio and Hamilton, Summit and Montgomery Counties violates Section 2 of the Voting Rights Act of 1965. Plaintiffs ask the Court to require the Defendants to provide each voter in his or her respective jurisdiction an opportunity to vote with election equipment that eliminates these disparities.

## **II. THE PARTIES**

### **A. Plaintiffs**

All of the Plaintiffs are citizens of the State of Ohio and registered voters in their respective counties. See Final Fact Stipulations ¶¶ 1-4 (Doc. 234). Effie Stewart and Marco D. Summerville are registered voters and residents of Summit County. Erin Otis and Vernelia Randall are registered voters and residents of Montgomery County. Howard Tolley and Art Slater are residents and registered voters of Hamilton County. Linda See is a registered voter and resident of Sandusky County.

**B. Defendants**

**1. The State Defendants**

Defendant J. Kenneth Blackwell is the chief elections officer and Secretary of the State of Ohio. Final Fact Stipulation ¶6 (Doc. 234). Defendants Raymond Butler, Geraldine Lewis, and Larry Loutszenhiser are Members of the State of Ohio Board of Examiners for the Approval of Electoral Marking Devices, *id.* ¶7, and are sued here in their official capacities and as the entity Ohio Board of Examiners for the Approval of Electoral Marking Devices.

**2. The County Defendants**

The county defendants are the boards of elections for Summit, Sandusky, Montgomery and Hamilton Counties who select the voting technology used in each of the elections and also conduct elections. Likewise, the county defendants include the county council for Summit County and boards of commissioners for Sandusky, Montgomery and Hamilton Counties and their members who fund the boards of elections for their respective counties. O.R.C. § 3501.17. They are sued here in their official capacities.

**III. STATEMENT OF FACTS**

**A. The Stipulated Evidence**

The State of Ohio, including the four defendant counties, certifies and operates a myriad of election

systems. Through its chief election officer Secretary of State Blackwell, Ohio authorizes four broad types of voting equipment, including punch card machines, optical scan machines, lever machines, and direct recording machines. Final Fact Stipulation ¶13 (Doc. 234). The counties choose their voting equipment from a list of systems that have been certified by the Secretary of State. See O.R.C. § 3506.15; Final Fact Stipulation ¶12 (Doc. 234).

Each of the types of voting equipment is comprised of a recording system that voters use to record their preferences as well as a vote tabulating system that reads and counts the ballots. Currently, 69 of Ohio's 88 counties use punch card ballots. Final Fact Stipulation ¶14 (Doc. 234). Among the 19 counties that use voting devices other than punch card ballots, two use automatic voting machines, and six use electronic voting equipment.” Id. at ¶15. These systems utilize different methods of reading and counting votes. Some systems, such as the ones operated by all four county defendants, count ballots at a central location after the polls have closed. Trial Transcript [hereinafter cited 151:4 – 9] (testimony of Dana Walch); Final Fact Stipulations ¶22 (Doc. 234) (Sandusky County). Other counties have optical scan ballots with readers located in the precinct that enable the voter to check the accuracy of the ballot by placing it in the vote tabulator while the voter is still present at the polling location. 149:17 - 151:23 (testimony of Dana Walch). Six others utilize electronic voting equipment that allows voter verification of candidate selection by means of a screen that shows exactly who the voter voted for before the ballot is finally cast. 150:1 - 6. In total, 81 of Ohio's 88 counties use "non-notice" equipment – voting technology that does not provide a voter a chance to assess his choices before finally casting his vote in the precinct at the time of voting. 156:23 - 157:12 (testimony of Dana Walch); Final Fact Stipulation ¶17.

The most crucial problem of non-notice technology involves the incidence of unintentional “residual

votes” – i.e., ballots for which no vote can be tallied in a particular electoral contest. There are two types of residual votes: overvotes and undervotes. "Overvoting" occurs when the voting system determines that more votes have been cast in a particular race than permitted in that race. Final Fact Stipulation ¶24 (Doc. 234). In punch card counties, this appears as more dislodged chads for a slate of candidates than allowed, 161:6-15 (testimony of Dana Walch); while in optical scan counties, more marks are made on the ballot than permitted. 696:19 – 697:13 (testimony of Barbara Tuckerman). "Undervoting" occurs when the voting system determines that the voter has cast no vote in a particular race, or fewer votes than permitted for the office in question. Final Fact Stipulation ¶24 (Doc. 234). When ballots containing overvotes and/or undervotes are taken to the tabulating machines after the polls have been closed, it is often impossible for the machines or officials to determine for which candidate the intended vote was cast. 685:23 – 700:3 (testimony of Barbara Tuckerman). Therefore, *unbeknownst to the voter*, no vote is tabulated for that ballot.

Official data from the 2000 presidential election demonstrate unequivocally that the 29 counties with the highest over/under vote percentages were all counties that use the punch card method of voting. Final Fact Stipulation ¶25 (Doc. 234); HAVA Plan, Exhibit 17, p. 16. Additionally, the seven counties with the lowest over/under vote percentages were all counties that did not use punch cards as their primary voting system. *Id.* Nor is this a problem that has only been recognized at a state level. Election officials in Hamilton County have formally and repeatedly expressed concern that the punch card balloting system leads to disfranchisement of African-American voters in the City of Cincinnati. See Letters of Timothy Burke, Chairman of the Hamilton County Board of Election, Exhibit 19.

Thus, the stipulated evidence establishes three facts that are crucial to this litigation: (1) when

compared to counties that use notice voting equipment, jurisdictions that use non-notice technology experience higher rates of residual voting, especially in electoral contests at the top of the ballot; (2) voters who are forced to use non-notice technology face a statistically greater risk of their ballots being spoiled than persons in neighboring counties who vote on notice technology; and (3) African American voters using punch card technology are more likely to be disfranchised by residual balloting than are their non-black counterparts.

## **B. Facts Pertaining to the Constitutional Claim**

During the five days of trial, the parties presented lay and expert testimony concerning the nature and performance of the punch card ballot and newer forms of balloting such as optical scan and electronic equipment. The portion of this testimony that is relevant to the Plaintiffs' constitutional claims can be divided into three parts. The first consists of testimony about the history of the punch card ballot and the problems that are inherent in its use. The second focuses on the performance of various forms of balloting technology in Ohio elections, both in the 2000 presidential and U.S. Senate contests and in a variety of other elections across the state in 1992, 1996, and 2000. The third part concerns the strengths and weaknesses of the methodologies that the parties' expert witnesses utilized in analyzing the electoral data in this case.

### **1. History and Qualitative Analysis of the Punch Card Ballot**

Roy Saltman, formerly of the National Bureau of Standards, wrote two reports on the use of computers in vote tallying, following extensive discussions with elections administrators and vendors of election equipment. 248:16 – 21. The first report, which was completed in 1975, identified the so-called “human factors” problems with punch card ballots, i.e. that voters were having difficulty translating their intentions into a representation that the computer would accept correctly. 252:17 – 253:17. In his second

report, issued in 1988, Saltman concluded that pre-scored punch cards should no longer be used in elections because of inconsistencies between counts and recounts, which gave rise to problems in several elections nationwide, including in Gwinnett County, Georgia, Palm Beach County, Florida, and Stark County, Ohio. 255:24 – 256:25.

It has been suggested during the course of this litigation that voter “stupidity” is largely to blame for residual voting, or that the reason why so many ballots are spoiled is that some voters are simply not intelligent enough to follow directions. While it is no doubt true that voter mistakes, misunderstandings, or carelessness may explain the existence of some residual ballots – a fact that still would not explain or justify the significant degree of disparity in residual voting across different types of voting equipment – Mr. Saltman’s testimony, along with that of other witnesses, clearly establishes that a full explanation for residual voting is more complex. Saltman’s expert report and testimony indicate that there are two reasons why the use of punch cards should be discontinued: (1) the punch card is inherently fragile and it becomes less stable when ballots are handled or manipulated or sent through a reader, resulting in overvotes and ambiguous results, 268:11 – 269:9; and (2) “human factors” cause certain voters to make mistakes while using punch cards, which range from inserting the card backwards, not anchoring it properly in the voting machine, or, for left-handed voters, covering up the voting booklet with the left hand and thereby having difficulty knowing which hole to punch, 298:20 – 299:17.

These and other problems have led to a situation where ten Ohio counties in the 2000 presidential election had levels of residual voting rates in excess of 3%, which, based on the Carter-Ford Commission guideline, places them in the “unacceptable” category. 291:18-25. All of these counties used punch card ballots. 290:1-6. Considerably more Ohio counties had rates of residual voting in the 2-3% range, which

placed them in the “worrying” category. 290:7 – 13. Of these, all but two used punch card ballots. 290:17 – 20. In all, the 29 counties in Ohio with the highest percentages of residual votes all used punch card ballots. 290:22-23.

Dana Walch, Director of Election Reform for the Ohio Secretary of State’s Office, confirmed that three of the County Defendants in this action use punch card ballots – Hamilton County, Montgomery County, and Summit County – and that the fourth County Defendant, Sandusky County, uses a central count optical scan system. 155:15 – 156:9. Walch also testified that none of the Defendant Counties uses “notice voting equipment” – in other words none of the Defendant Counties uses technology that indicates to the voters that there is some error or inconsistency on their ballots. 149:17 – 25; 151:4 – 18. In contrast, Walch admitted that other voting systems used in Ohio, such as the electronic “DRE” and the precinct count optical scan systems, do provide voters with notice of error. 150:1 – 9. The latter systems make it easier for voters to check their errors, 152:16 – 23, and they likewise can be programmed to prevent overvotes and undervotes, 153:8 – 154:6. As such, they reduce voter error. 163:9 – 12. Because electronic and precinct count optical scan voting systems reduce the error rates that occur when voters use punch cards or central count optical scan equipment, the Ohio Secretary of State’s office would like to replace the non-notice equipment with notice equipment. 159:22 – 160:21.

## **2. Quantitative Analysis of Voting Equipment in Ohio Elections**

The testimony adduced at trial included quantitative analyses of voting technology from both sides’ experts. Plaintiffs’ expert, Dr. Martha Kropf, examined data from the 2000 presidential and U.S. Senate elections, while Defendants’ expert, Dr. John R. Lott, analyzed data from the presidential, U.S. Senate, U.S. Congress, Ohio Senate, and Ohio House elections of 1992, 1996, and 2000. Kropf also looked at

information from these years. Her expert report (Exhibit 1), affidavit (Exhibit 18), and testimony include an analysis of residual votes by equipment type in all Ohio counties as well as a comparison of overvoting in four urban counties in which separate information on overvoting and undervoting is available.

For the only contests in which voters across the state were choosing between the same candidates, punch cards did worse than other types of voting equipment. Using weighted averages that gave counties of different sizes a proportional influence based on their population, Kropf concluded that Votomatic punch cards had a residual vote rate of 2.21 percent, central count optical scans had a rate of 1.58 percent, and electronic “DRE” machines had a rate of .67 percent. 909:23 - 910:11; see also Exhibit 18 (Kropf Affidavit). In the U.S. Senate contest, Votomatic punch cards had a residual vote rate of 7.68 percent, electric “DRE” machines had a rate of 6.13 percent, and optical scan central count machines had a rate of 4.14 percent. 910:17 - 22.

Kropf’s analysis of overvoting compared overvotes in three of the Defendant Counties that used punch cards with Franklin County, which uses notice technology to prevent overvotes. 153:8-9. She testified that there were 2,916 overvotes in Hamilton County in the 2000 presidential election, 1,470 overvotes in Summit County, and 2,469 overvotes in Montgomery County. 862:18 - 863:14. In contrast, in Franklin County there were no overvotes. (186:15-24) (testimony of Dana Walch).

Kropf’s analysis of undervoting included findings from a peer-reviewed academic paper she wrote with co-author Stephen Knack. See 237:12 – 238: 11; Exhibit 3. The authors concluded that intentional undervoting in presidential elections is a relatively rare event, 95:7-9, that is estimated to involve between .23% and .75% of all voters, 238:12-17. It is undisputed that this is the best available data on intentional undervoting. Id. From these findings, Kropf concludes that when levels of undervoting exceed this

threshold and vary by equipment, it is highly likely that they arise from unintentional undervoting associated with problems of the punch card ballot. 105:11 – 108:8.

Finally, Kropf testified that intentional undervoting increases as one moves down the ballot. She explained this phenomenon by referring to the salience of the contest for voters. That is, when voters do not perceive a given electoral contest as important they do not take the time to acquire the information they need to make voting decisions. 908:11 - 23; 105:11 - 25. Plaintiffs' other expert witness, Roy Saltman, agreed with this conclusion. 312:18 - 313:25. This finding also is borne out by other scholars' research, including that by Wattenberg *et al.*, who used data from exit polls to conclude that intentional undervoting increased in elections for the House of Representatives.<sup>1</sup> *Id.*

As Professor Kropf testified, other scholars have confirmed the thesis that punch cards are associated with relatively high rates of residual voting. These include Ansolabehere,<sup>2</sup> and an associated analysis known as the CalTech/MIT study.<sup>3</sup> Ansolabehere examined ballots in presidential elections from 1988 – 2000, and he found that the punch card system performed the worst of all the systems examined. 70:10 – 24. Ansolabehere's methodology featured multiple regression analysis, which is similar to the approach used by Dr. Lott, and he found that one form of notice voting technology, central count optical scan systems, outperformed the other systems. 71:2 - 5.

For his part, Dr. Lott found that across the three presidential elections of 1992, 1996, and 2000, the “non-voted” ballot rate for Votomatic punch cards was 2.4%, the rate for optical scans was 2.01%, and that for electronic “DRE” machines was 1.0%. See 558:15-24; Lott Report, Exhibit R, at Table 3. In the

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<sup>1</sup> Wattenberg, Martin P, Ian McAllister, and Anthony Salvanto 2000. “How Voting is Like Taking an SAT Test: An Analysis of American Voter Rolloff.” *American Politics Quarterly* 28: 234-250.

<sup>2</sup> Ansolabehere, Stephen. 2001. “Voting Machines, Race, and Equal Protection.” *Election Law Journal* 1 (1): 61-70.

<sup>3</sup> Caltech/MIT Voting Technology Project. 2001. “Voting: What Is, What Could Be.” Caltech/MIT.

U.S. Senate contests of 1992 and 2000, Lott found that the “non-voted” ballot rate for Votomatic punch cards was 5.47%, the rate for optical scans was 4.88%, and the rate for electronic “DRE” machines was 6.29%. Lott’s findings with respect to the performance of the various forms of balloting equipment in the presidential elections square with those of Kropf: punch cards are associated with higher rates of residual ballots and electronic “DRE” machines are associated with lower levels of residual ballots. However, the findings of the two experts differ with respect to the U.S. Senate election. While both scholars find that optical scan technology is associated with the lowest levels of residual balloting in this election, Lott concludes that punch cards outperform electronic equipment, whereas Kropf finds that the general pattern is that the electronic machines outperform the Votomatic punch cards. 920:13 – 922:1. As Dr. Kropf testified, these differences could arise from the fact that Lott used unweighted data, 866:6 – 14, and neither the 1992 nor the 2000 Senate contests were very competitive. This is problematic because it gives disproportionate weight to counties with smaller populations. 866:6 – 867:4. In effect, this means that the counties are not “standardized.” 868:1-2.

Lott also examined nonvoted ballot rates for various down-ballot contests in an effort to show that voters become “fatigued” when using electronic equipment and that punch cards outperform electronic equipment. But Lott’s testimony actually shows nothing of the sort. As Kropf testified, the down-ballot elections that Lott examined were not statewide contests, were largely uncompetitive, and in some instances were even uncontested. 882:22 - 888:21. On cross-examination, Lott admitted that some of the contests he examined were uncontested and not close, and this increased voter roll-off. 619:4 - 13. He admitted that much of the increase in non-voted ballots in down-ballot contests is because voters are less interested in those contests. 607:23 - 608:2. He admitted that in some instances, voter participation in contests down

the ballot actually was higher than in contests higher up on the ballot. 622:22 – 25; 624:19 - 24. Finally, he admitted that the effects of having only one candidate on the ballot are extremely large. 645:12 - 24. As such, discrepancies in down-ballot contests tell us nothing about the reliability of the voting equipment used.

### **3. The Methodology of the Parties' Experts**

Although many of the methodological disputes between Kropf and Lott rise to the level of arguments that are more appropriately addressed in the Argument portion of this Brief, given the complexity of the statistical techniques that have been employed by both sides, it may be helpful to identify here the factual differences between the two experts' methodologies. Lott employed a panel design that includes all wards in Ohio across three election cycles, (i.e. 1992, 1996, and 2000) to identify change in the level of nonvoted ballots across time, and he describes this approach as being "superior" to the cross-sectional design that the Plaintiffs used. 540:21-541:24. In contrast, the Plaintiffs' cross-sectional design looks at jurisdictions at one moment in time (*i.e.* the 2000 general election) to study the relationships and variables of interest. 848:15-24; 856:2-3 (testimony of Martha Kropf). However, as Kropf testified, if the purpose of a study is to compare the performance of various forms of voting technologies, and relatively few counties changed their voting technology during the years that the panel study examines, there is little in the way of change to explain. 845:15 – 24. As Kropf phrased it, "When there is very little change over time you basically don't have a natural experiment. The variation or the change that you are really looking at will be mostly the cross-sectional differences among wards, because the voting technology itself wouldn't change; it hasn't changed very often. So if you are using (a dataset) without having a great deal of change to compare, you are unable to find relationships." 844:19-846:2. This explains why the scattergrams presented in Lott's Report do not show clear or significant empirical findings. Lott Report, Exhibit R, at Figures 2A – 2F.

During the years between 1992 and 2000, only three Ohio counties changed their balloting systems from punch cards to some form of notice technology. 845:10 – 846:2. Therefore, since there is little to no change to explain, the panel design is inappropriate. 845:15 – 24 (testimony of Martha Kropf).

Several corollaries follow from this observation. First, because Lott uses all counties in Ohio and relatively few of them conducted separate tabulations of overvotes and undervotes, he was unable to provide separate data on a key variable of interest – the levels of overvoting and undervoting in Hamilton, Montgomery, and Summit Counties. 549:19 – 550:2; 862:8 – 12. Plaintiffs’ cross-sectional study of these three counties and the comparison county (Franklin) does make it possible to examine overvoting across punch card and electronic counties. 443:17 – 444:2 (testimony of Dr. Engstrom). Indeed, this is precisely why these counties were selected for inclusion in this litigation.

Second, Lott’s research design provides no way to distinguish between intentional and unintentional undervoting. This is a serious problem because the level of intentional undervoting increases in down-ballot elections as voter knowledge of and interest in the contests diminishes. 885:24 – 886:24. Lott himself readily admits this fact. 607:23 – 608:2; see also 621:5-8; 625:4 –8. According to Kropf’s testimony, Lott’s failure to control for intentional undervoting in the down-ballot elections introduces “noise” into the data – that is, it injects uncontrolled, extraneous variables into the equation, such as unequal amounts of media coverage of various down-ballot contests – that compromise the results. 890:2-17. In contrast, Kropf does provide an estimate of intentional undervoting in the one contest that is at the heart of the Plaintiffs’ case, the presidential election, and her analysis indicates that levels of undervoting in excess of .75% are unintentional and are probably due to punch card error. 84:23 - 85:9.

### **C. Facts Pertaining to the Section Two Claim**

**1. Intra-County Racial Disparities in Residual Votes in Hamilton, Montgomery, and Summit Counties**

During the 2000 presidential election, the use of punch card voting equipment resulted in larger intra-county racial differences in overvoting and/or undervoting than did notice technology. Engstrom Report (Exhibit 11), p. 10. Plaintiffs' expert, Dr. Richard Engstrom, used three analytic procedures to assess the extent to which the African-American voters overvoted or undervoted at different rates than non-African Americans voters in each of these counties.<sup>4</sup> See Final Fact Stipulation ¶35. In contrast, the Defendants' expert, Dr. John R. Lott, presented statewide estimates of nonvoted ballots by race based on one analytic procedure, comparisons of non-voted ballots in the so-called "top ten percent black" and "top ten percent white" wards. This portion of the Statement of Facts examines their respective findings.

Engstrom's analysis of the intra-county disparities in residual ballots begins with an examination of demographic and socioeconomic indicators in Hamilton, Montgomery, and Summit Counties. He concludes that these counties are roughly similar in terms of race, educational attainment levels, and income. 438:8 - 15. He then examines overvoting and undervoting by race in each of the Defendant Counties, comparing these figures with those for a jurisdiction that uses notice voting systems, Franklin County. According to Engstrom's analysis of overvotes in the 2000 presidential election in Hamilton County, the ballots of African-American voters were rejected at nearly *seven times* the rate of the ballots of non-African-Americans voters. His analysis of undervotes in Hamilton County shows that African-Americans

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<sup>4</sup> Two of these methods were approved by the United States Supreme Court in Thornburg v. Gingles, 478 U.S. 30 (1986). These are homogeneous precinct analysis and ecological regression analysis. Homogeneous precinct analyses simply report the percentage of the voters that overvoted or undervoted in the precincts in which over 90 percent of the voting age population was not African American and in those in which over 90 percent was African American. Regression analyses provide estimates of these rates for African American and non-African American voters based on the votes cast in all of the precincts in an election. The third methodology is called Ecological Inference (or EI). This is an estimation

undervoted at *nearly twice* the rate of non-African-Americans.<sup>5</sup> Adjusting for the estimated rate of intentional undervotes, African-Americans in Hamilton County suffered unintentional undervotes *seven-and-a-half times* more than non-African American voters did. See Kropf Report (Exhibit 1), ¶¶8-10. In Montgomery County, African-Americans voters experienced residual voting around *two-and-a-half times* as often as non-African-Americans voters. Engstrom Report (Exhibit 11). Similarly, in Summit County, African-American voters experienced overvoting more than *nine times* the rate of non-African-Americans. African-American voters experienced total undervoting almost *two-and-a-half times* more frequently than non-African-Americans and experienced unintentional undervoting more than *three times* the rate of non-African American voters. Id.

Franklin County uses Direct Record Electronic (“DRE”) voting machines. Engstrom Report (Exhibit 11), at 3. These devices do not allow overvoting, notify voters when undervoting occurs, and afford voters an opportunity to correct an accidental undervote. Id. Consequently, there is no racial disparity in the number of observed overvotes in Franklin County—neither blacks nor whites experience any overvoting. Id. at 6-7. Moreover, DRE machines greatly reduce the rate of accidental undervoting. For non-African-Americans, the rate becomes negligible, and for African-Americans it drops below 1%, nearly eliminating the racial gap in accidental undervotes. Id.

As the Plaintiffs’ experts, Dr. Engstrom and Dr. Salling testified, these racial disparities in the rates of residual votes exist against a backdrop of consistent socioeconomic disparities between African-

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procedure that also takes into account all of the precincts in which votes are cast that was developed subsequent to Thornburg v. Gingles by Gary King. Engstrom Report (Exhibit 11) at 5-6.

<sup>5</sup>The result of fractional disparity between the races on over- and under-votes is calculated from data from the Engstrom Report by averaging the results for each of the three methods and dividing the averages. For Hamilton overvotes, the exact number is 6.808. For Hamilton undervotes, it is 1.737. Summit overvotes—9.217; Summit undervotes—2.442. Montgomery residual votes—2.554.

Americans and whites in each of the respective counties. In particular, racial gaps exist in the number of single parent homes, the number of children attending private schools, level of education attained, unemployment rates, size of the labor force, income levels, the number of people living in poverty, earnings, crowded housing conditions, access to telephones and transportation, plumbing, rental expenses, and property values. 336:12 - 345:13 (testimony of Dr. Salling). The size and direction of these disparities are remarkably consistent among the four counties considered. However, while the racial disparities do interact with error-prone punch card machines in Hamilton, Summit, and Montgomery Counties to cause racially disparate rates of residual ballots, the superior voting technology used in Franklin County prevents the socioeconomic disparities from translating into a racial gap in residual ballots. In other words, unlike Defendant Counties, Franklin County's use of DRE machines overcomes ambient racial disparities and ensures that blacks and whites have an equal opportunity to participate in the political process. Defendant Counties' use of punch card machines interacts with socioeconomic disparities to cause the racial disparities observed in the rate of uncounted ballots.

Defendants' expert, Dr. John R. Lott, examined *statewide data* from three election cycles and confirmed Plaintiffs' allegations that a racial gap exists in residual balloting in presidential elections. A close examination of Lott's findings, as expressed in Table 4 of his report, reveals that voters in the Top 10% of Wards by Percent Black Population experienced higher rates of non-voted ballots than those in the Top 10% of Wards by Percent White Population in the following electoral contests: U.S. Senate, state senate, and state house. Lott Report (Exhibit R-24), at Table 4. Thus, even if one is willing to overlook the numerous methodological flaws in Lott's report, his own findings lend credence to Plaintiffs' allegations that a racial gap does exist in residual voting in Ohio. But the flaws in Lott's report and accompanying testimony

are too serious to be overlooked, and they warrant special attention.

## **2. The Methodology of the Parties' Experts**

In order to address the legal issues under Section Two of the Voting Rights Act that arise in this case, both parties must estimate the level of residual balloting by race. That is, because elections officials in Ohio do not gather information on the race of the voter at the time of registration or polling, the racial identity of voters who cast residual ballots must be estimated. Because the process by which this occurs is complex and involves what may be unfamiliar scientific territory, a comparative discussion of the methodological approaches each side employs may be helpful. The discussion will be organized around the three broad methodological issues that divide the parties and that the Court must resolve: (1) What research design does each side employ, and how suitable is it for the task at hand? (2) What methodologies does each side use to arrive at its empirical conclusions, and to what extent do these methods conform to the conventions of modern social science? and (3) To what extent does the empirical data that each side develops prove the assertions that are being made?

Plaintiffs have employed a cross-sectional design that focuses on the level of residual balloting in four specific counties in the 2000 presidential election. These counties include three jurisdictions that use punch cards – Hamilton, Montgomery, and Summit Counties – and one that uses electronic equipment – Franklin County. Of the four counties, two gathered data on overvotes and undervotes by precinct, Hamilton and Summit. A third county, Montgomery, gathered aggregate data on overvotes and undervotes but did not do so by precinct. The fourth county, Franklin, gathered undervotes by precinct but had no overvotes by virtue of its adoption of electronic “DRE” voting technology. In contrast, Defendants used a panel design that compared the level of residual balloting across the entire state at four different times, in the

1992, 1996, and 2000 general elections. Because Defendants used data from across the state, and most Ohio counties did not gather separate statistics on overvotes and undervotes, they were unable to conduct an analysis of these variables. 443:16-444:2 (testimony of Richard Engstrom).

Defendants' expert, Dr. Lott, testified that panel designs are superior to cross-sectional designs because they enable researchers to examine behavior over time. 545:7 – 546:9. However, Plaintiffs' expert, Dr. Kropf, countered that panel designs are not an appropriate methodology to employ when there is little change in the variables of interest over time. She asserted that both of the key variables in this case – voting technology and percent of African Americans in a ward – did not change very significantly between 1992 and 2000. Therefore, in fact, there was little change in the data for Dr. Lott to explain. In effect, this means that on these facts there is little theoretical benefit to a panel design. 845:10-846:2; 900:5-20 (testimony of Martha Kropf).

The second issue concerns the empirical methods each side employed and the extent to which these methods comply with social science conventions. On this front, there are two primary questions that must be resolved: first, whether ward or precinct geography is most appropriate under the circumstances, and second, whether the techniques for estimating racial behavior (here the level of residual ballots cast by African American and non-African American voters) are reliable. With respect to the first question, Dr. Mark Salling testified that it is preferable to use the smallest possible units of geographical aggregation when estimating racial behavior, and, as applied to this case, the smallest unit of geographical aggregation would be the precinct. 331:23 – 335:16. Dr. Lott also agreed with this proposition, 546:10 – 547:20; however, he indicated that given his decision to pursue a panel study, an analysis based on precincts would not be practical because too many changes in precinct boundaries had occurred during the years between 1992

and 2000. 594:22 – 597:1. In view of the lack of theoretical benefit to a panel design, as outlined above, it is now becomes clear that there is a significant cost to the use of this method – it carries with it far greater levels of uncertainty concerning whether in fact a given ward is homogeneous enough to constitute being labeled “African American.” Lott himself testified that among the wards included in the “top ten percent wards by African American population” is a ward that is only 9% black, 626:19 - 23, a point that Kropf criticized, 895:20 – 896:5.

The second empirical question concerns the reliability of the techniques the experts used to estimate the level of residual balloting by race. Examining the level of residual ballots by ward or precinct alone does not provide a valid answer to this question because of the ecological fallacy, which is defined as the logical error of using aggregate data to predict individual level behavior. For example, if a given precinct is 90% black and has a 3% residual ballot rate, one could not validly determine that black voters cast 90% of the residual ballots there. The parties use different methods to address this problem. Lott uses a “top ten percent wards by African American” approach, which seeks to isolate heavily black wards as a means of examining residual ballot rates in these areas. 564:17 – 565:9. Engstrom uses a combination of three methods to address this problem, homogeneous precinct analysis, ecological regression, and ecological inference, 444:21 - 445:13, and each of these methods is discussed at greater length in Engstrom’s testimony. 445:14 - 447:15; 452:11 - 453:22. While federal courts have approved of all three of the methods that Engstrom employed for estimating the racial gap in residual ballots, none have endorsed the approach that Lott has taken.<sup>6</sup> The “top ten percent” of wards by African American population is not the equivalent of homogeneous precinct analysis since the latter term denotes that a given geographical unit be at

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<sup>6</sup> For further discussion of this issue, see note 4, supra.

least 90% black or at least 90% white. 445:14 - 446:13. As it is, of all the methods that Engstrom used, social scientists have the least confidence in homogeneous precinct analysis, 456:6 - 8; yet while Engstrom uses other methods to overcome this deficiency; Lott does not. Nor can measures of statistical significance be applied to data from homogeneous precincts or the “top ten percent” geographical units method that Lott uses. 470:15 - 19. In contrast, measures of statistical significance can be applied to ecological regression and ecological inference data, and, as Engstrom testified, in the case of all three of the Defendant Counties, the relationship between overvotes, undervotes and race is statistically significant, and the correlation between them is strong. 459:7 - 461:22; 468:1 - 8.

The third methodological issue concerns the extent to which the empirical data support the conclusions that each expert draws. On this question, it is useful to consider the experts’ testimony concerning the racial gap in residual balloting, the cutoffs for statistical significance that they employ, and the overall legal relevance of the data itself. Based on the three estimation techniques outlined above, Engstrom found that there was a racial gap in the level of overvotes and undervotes in Hamilton and Summit Counties; he likewise found a racial gap in the level of residual ballots in Montgomery County. 459:7 - 461:7. He testified that a method of “triangulation” is the best way to view these data. 457:14 - 459:6. This method asks the question whether all the estimates run in the same general direction, and Engstrom’s unequivocal answer is yes. 459:7 - 462:1.

Using his “Top 10% of Wards by Percent Black” or “Top 10% of Wards by Percent White” categorizations, Lott finds that blacks and whites are about equally likely to cast residual ballots in presidential contests but that blacks are more likely to cast residual ballots in U.S. Senate, state senate, and state house contests. Lott Report (Exhibit R-24), at Table 4. In the Congressional contests, he finds that

whites are more likely than blacks to cast residual ballots. Id. at 7. Lott then goes on to argue that if African Americans are disproportionately harmed by punch cards, the non-voted ballot rate in wards using punch cards should rise as the percentage of population that is African American increases, and he attempts to show that this is not the case. Id. at 8. But the problem with this assertion, as Dr. Engstrom testified, is that common tests for statistical significance cannot be used on data that come from homogeneous precinct analysis, or its cousin, the “Top Ten Wards by Percent Black Population” that Lott uses. 470:15 - 19. In addition, a second problem with Lott’s analysis is that black voters in Ohio and in the three Defendant Counties are not completely geographically segregated. Lott assumes that every other black voter in Ohio votes the same way that residents of extremely segregated neighborhoods do, whereas the alternative tests that Engstrom uses, ecological regression and ecological inference, do not make this assumption.<sup>7</sup>

The more sophisticated negative binomial regression analyses in Tables 5, 6, and 7 of Lott’s report likewise are suspect. Lott Report (Exhibit R), at Tables 5, 6, and 7. Lott’s regression equations contain severe multicollinearity problems. See 926:25 - 932:25 (testimony of Martha Kropf). Multicollinearity arises when regression equations employ two or more variables that are so closely related that they mask the independent effect of each on the dependent variable. Id. Kropf testified that Lott includes an unusually high 29 different variables in his regression equations, and many of these are susceptible to multicollinearity problems. 931:24 – 932:6. For example, instead of simply using a variable concerning how many African Americans reside in a given precinct, Lott combines African American status with other variables, such as African American Republicans, African American Democrats, or African Americans Earning More Than

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<sup>7</sup> For further discussion of this problem, see J. Morgan Kousser (2001), “Ecological Inference from Goodman to King”, *Historical Methods*, 34:101.

\$100,000 Per Year. 930:18 – 931:7. Kropf also testified that scholars such as Professor Allan Lichtman<sup>8</sup> have criticized Lott’s prior work on residual voting in Florida, which closely resembles his work in this case, on similar grounds. 927:19 – 932:25. For these reasons, Lott’s methodological approach is suspect.

**IV. THE DEFENDANTS’ CERTIFICATION AND USE OF ERROR-PRONE VOTING EQUIPMENT VIOLATE THE FOURTEENTH AMENDMENT TO THE UNITED STATES CONSTITUTION**

**A. The Continuing Use of Error-Prone Voting Equipment Violates the Equal Protection Clause of the Fourteenth Amendment by Devaluing the Votes of Plaintiffs and Other Citizens Who Must Use that Equipment**

The Supreme Court has long held that inequalities in the area of voting warrant special attention under the Fourteenth Amendment. The Equal Protection Clause demands that election officials accord “equal weight” to each vote and “equal dignity” to each voter. Bush v. Gore, 531 U.S. 98, 105 (2000). The question in this case is whether, under Bush and the other decisions stating this core principle of electoral equality, Defendants “may allow the use of different types of voting equipment with substantially different levels of accuracy.” Black v. McGuffage, 209 F. Supp. 2d 889, 898 (N.D. Ill. 2002).

The evidence at trial showed that Ohio continues to use voting equipment with substantially different levels of accuracy and reliability, in violation of the Equal Protection Clause. Plaintiffs’ equal protection claim rests on the statewide disparities arising from the use of two types of voting systems: 1) the infamous punch card system, used by the vast majority of Ohio counties (68 of 88, according to Dana Walch of the Secretary of State’s office, 157:4-5, and 2) optical scan systems that lack error notification, used in ten Ohio counties. 157:5-6. As summarized below, the continuing use of these demonstrably unreliable voting systems denies equal treatment to those citizens who have no choice but to use the equipment provided, and

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<sup>8</sup> Lichtman, Allan J. 2003. “What Really Happened in Florida’s 2000 Presidential Election.” *Journal of Legal Studies*

are disadvantaged in comparison to their fellow citizens in other counties who use better voting systems.

**1. The Parties Agree That the Right to Vote Is Fundamental and That Election Practices Are Subject to Strict Scrutiny If They Have a Differential Impact on That Fundamental Right**

The Supreme Court has long held that: “No right is more precious in a free country than that of having a voice in the election of those who make the laws under which, as good citizens, we must live. Other rights, even the most basic, are illusory if the right to vote is undermined.” Wesberry v. Sanders, 376 U.S. 2, 17 (1964). It is also settled law that at the core of the right to vote is “the right of qualified voters within a state to cast their ballots and have them counted.” United States v. Classic, 313 U.S. 299, 315 (1941). Long before Bush v. Gore, the Supreme Court has affirmed the core principle of equal weight to each vote and equal dignity for each voter. 505 U.S. at 104, 107 (citing Harper v. Virginia Bd. of Elections, 383 U.S. 663, 665 (1966), Reynolds v. Sims, 377 U.S. 533, 555 (1964), Gray v. Sanders, 372 U.S. 368 (1962), and Moore v. Ogilvie, 394 U.S. 814 (1969)). For example, in Reynolds, the Court struck down a legislative apportionment scheme that gave some voters less representation than others, based solely on the jurisdiction within which they lived. The Court held that “[d]iluting the weight of votes because of place of residence impairs basic constitutional rights under the Fourteenth Amendment.” 377 U.S. at 566.

It is critical to recognize that *the parties agree* on the constitutional rule that governs this case. In particular, Defendants acknowledge an election practice is subject to strict scrutiny if it “has an impact on [Plaintiffs’] ability to exercise the fundamental right to vote.” State’s Opp. to MSJ (Doc. 186), at 22 (quoting McDonald v. Bd. of Election Comm’rs of Chicago, 394 U.S. 814, 807 (1969); see also Mixon v.

NAACP, 193 F.3d 389 (6th Cir. 1999) (holding that a law that “grants the right to vote to some residents while denying the vote to others” is subject to strict scrutiny). The question before this Court, therefore, is whether the evidence shows that the challenged voting machines have “an impact” on the voting rights of those who must use them. If the use of non-notice punch card and optical scan voting systems does have an impact on the fundamental right to vote, then the certification and use of such systems may only be upheld if “necessary to promote a compelling state interest.” Mixon, 193 F.3d at 402.

There is, accordingly, no disagreement on the constitutional standard: the challenged election practices are subject to strict scrutiny if they have an impact on the fundamental right to vote. Plaintiffs now turn to the application of that standard.

**2. The Evidence Shows That the Use of Non-Notice Punch Card and Optical Scans Has a Substantial Impact on the Fundamental Right to Vote**

As set forth above, Defendants have acknowledged that strict scrutiny is the applicable standard where an election practice has an impact on the right to vote. McDonald v. Bd. of Elect. Comm’rs of Chicago, 394 U.S. 802, 807 (1969), *quoted in* State’s Opp. to MSJ (Doc. 186), at 22. This acknowledgement is consistent with the Supreme Court’s longstanding recognition that: “Especially since the right to exercise the franchise in a free and unimpaired manner is preservative of other basic civil and political rights, any alleged infringement must be carefully and meticulously scrutinized.” Harper v. Virginia Bd. of Elections, 383 U.S. 663, 667 (1966); *see also* Reynolds, 377 U.S. at 562 (“any alleged infringement of the right of citizens to vote must be carefully and meticulously scrutinized.”) Moreover, “a careful examination...is especially warranted where lines are drawn on the basis of wealth or race.” Id. at 807

The evidence introduced at trial, including the admissions of the Secretary of State’s office, leaves

no doubt that the failure to replace the challenged voting equipment has an impact, and in fact a serious impact, on Ohioans' ability to exercise their right to vote. State law permits, and has resulted in, a system wherein some voters must use equipment that is substantially less reliable than that used by others. Ohio has thereby established a dual system of voting, where the residents of most counties – including the Montgomery, Hamilton, and Summit County Plaintiffs – may only vote with “hanging chad” punch card equipment that does not include error notification, while the residents of other counties vote with better equipment that does provide voters with notice and the opportunity to correct errors. See Final Fact Stipulations ¶¶12, 13; Ohio Revised Code §§ 3506.01 *et seq.* Second, some voters, particularly those who are required by the operation of law to vote on punch card machines (or, in Sandusky County, on central-count optical scans), are subjected to a significantly greater risk that their votes will *not* be counted. Final Fact Stipulations ¶¶ 16, 17, 18, 25. As a result of this statutory scheme, the Plaintiffs and members of the class which they purport to represent are disadvantaged in the meaningful exercise of the franchise when compared to those individuals who live and vote in counties that have adopted the more reliable and accurate voting equipment that incorporates “second chance” voting. See Final Fact Stipulations ¶¶16-18.

As a result of the continuing certification and use of punch card voting equipment, the votes of tens of thousands of Ohioans are denied in each election cycle. Defendants' own evidence shows that non-notice punch cards and optical scans result in substantially higher numbers of lost votes than the other equipment used in the State of Ohio. Summary of Residual Votes by Voting Type and Race (Exhibit 35). Thus, Ohio and the Defendant Counties are operating an election system that results in discrimination with respect to the right to vote, based solely on the jurisdiction in which one happens to reside – and, more

specifically, on whether that county continues to use demonstrably unreliable voting equipment. Citizens in most counties (including all of those in which Plaintiffs reside) are required to use equipment without error notification that systematically undercounts votes, while voters in other counties use more reliable voting equipment with error notification. See Order (Doc. 234) at 3, ¶¶ 22-23.

The effect of this dual system is to deny the votes and dilute the voting strength of Ohioans compelled to use less reliable, less accurate machinery. Whether an individual's vote is counted – or whether an individual is exposed to a significant or minor risk that his or her vote will not be counted – is a matter of completely arbitrary happenstance, and “[e]qual protection of the law is not achieved through indiscriminate imposition of inequalities.” Shelley v. Kraemer, 334 U.S. 1, 22 (1948); see also Bush v. Gore, 531 U.S. 98, 105 (2000) (“The right to vote can be denied by a debasement or dilution of the weight of a citizen’s vote just as effectively as by wholly prohibiting the free exercise of the franchise.”) (quoting Reynolds v. Sims, 377 U.S. 533, 555 (1964)). It should therefore come as no surprise that lower courts since Bush have had no difficulty in upholding equal protection claims, arising from the use of unreliable voting systems in some counties but not others. See Black v. McGuffage, 209 F. Supp. 2d 889, 899 (N.D. Ill. 2002). As the Black court held that:

The State, through the selection and allowance of voting systems with greatly varying accuracy rates, ‘value[s] one person’s vote over that of another,’ Bush, 531 U.S. at 104-105, even if it does not know the faces of those people whose votes get valued less. This system does not afford the ‘equal dignity owed to each voter.’

Id.; see also Common Cause v. Jones, 213 F. Supp. 2d 1106 (C.D. Cal. 2001)(denying state’s motion for judgment on the pleadings, where voters alleged that “individuals living in counties where the punch-card

system is used are substantially less likely to have their votes counted.”).<sup>9</sup>

This case is much stronger than either Black or Common Cause, in that Plaintiffs have not only alleged that the use of unreliable voting equipment has an impact on whether citizens’ votes will be counted, but have introduced evidence – including the admissions of the Secretary of State’s office – demonstrating the serious effect that the continuing use of punch cards has on voting rights. At trial, the State’s Director of Elections Dana Walch testified on behalf of the Secretary of State’s office. 131:12-13, 134:9-12. Mr. Walch testified unequivocally that there is a lesser rate of error with Direct Record Electronic (“DRE”) and other “second chance” technologies than with punch card voting. (163:9-11.) As he testified, research has shown “voter error higher on punch card devices than other forms of voting.” 178:16-18. Secretary of State Blackwell himself has acknowledged that a “vast body of information . . . documenting the higher rate of error for punch cards compared to other systems, and highlighting the benefits of second chance precinct count voting systems.” See 200:16-23; Exhibit 22, at 17. The Secretary of State’s office has therefore, to its credit, acknowledged the need to move to “more reliable” and “more user friendly” forms of voting technology. 160:15-18. Unfortunately, the Secretary of State’s office has still to this date, over four years after the profound deficiencies of punch cards were revealed to the American public, failed to replace this unreliable and error-prone type of equipment.

*Defendants’ own data* show that in the 2000 presidential elections, the punch card voting machines

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<sup>9</sup> In addition, a three-judge panel of the Ninth Circuit in Southwest Voter Registration Education Project v. Shelley, 344 F.3d 882 (9th Cir. 2003), concluded that Plaintiffs had shown a likelihood of success on the merits of their claim that the use of pre-scored punch card machines violates equal protection, relying on evidence that this equipment “eliminates some voters’ ballots entirely.” Id. at 900 (issuing preliminary injunction postponing California recall election until the replacement of punch card voting equipment). Although the three-judge panel’s decision was subsequently vacated, 344 F.3d 914 (9th Cir. 2003) (en banc), the *en banc* court rested its decision on the burden on the state’s voters that would occur if the already-scheduled election were postponed. Id. at 919-20. On the merits of the equal protection claim, the *en banc* court stated that “the argument is one over which reasonable jurists may differ.” Id. at 918.

had a residual vote rate over *three times* that of electronic and lever machines. Exhibit 35. Plaintiffs have provided uncontradicted evidence that the percentage of intentional non-votes in presidential contests is quite small. Based on the most reliable available data, intentional undervoting occurs to between .23% and .75% of all voters. 238:12-17. Given that the total residual vote rate with punch cards was 2.3%, this means that somewhere between 55,000 and 74,000 votes were lost due to the use of this equipment in 2000.

Although Defendants have criticized Plaintiffs for relying on 2000 data, an analysis of the data for the presidential elections in 1992, 1996, and 2000 yields similar results. In particular, these data – supplied by Defendants’ own expert John Lott – show that punch card voting machines had a residual vote rate significantly *higher* than other equipment in these elections. According to Lott’s data, the residual vote rate for punch card voting machines was 2.29%, compared to 0.94% for electronic, 1.04% for lever, and 1.15% for precinct-count optical scans. Kropf Affidavit (Exhibit 18), at 5. Central-count optical scan systems fared only slightly better than punch cards, according to this data, with a residual vote rate of 2.14% in the 1992, 1996, and 2000 presidential contests. Although Defendants’ expert John Lott relies on a flawed analysis of this data, even he acknowledges that punch card machines had a significantly higher residual vote rate (2.4%) than electronic (1.0%), lever (1.4%), or optical scan machines (2.0%) in the presidential elections between 1992 and 2000.

Plaintiffs’ expert testimony confirms what the State’s own data and expert evidence show: that the challenged voting equipment is substantially less accurate than other systems that are available and in use elsewhere. The expert testimony of Roy Saltman demonstrated that, far from being an isolated case, the problems experienced with Ohio’s punch card voting systems are typical of those that have plagued the use

of this equipment nationwide. 311:11-312:7; 314:15-20. Even where voters conscientiously punch out the correct chad, fully, the use of the punch card system can result in the loss of votes for reasons completely unrelated to the voter error. As Saltman explained: “[W]hen the ballot is then handled or manipulated or sent through a reader, it is more likely that additional chads will be dislodged and fall out. And if that happens, the votes indicated on the ballot are changed because the presence of holes indicates votes.” 269:7-11. The result will be that the ballot shows an invalid “overvote” (casting more than the allowed number of votes) *even though the voter followed instructions to the letter.* 269:13-15. It should therefore come as no surprise that in the most recent election, large numbers of uncounted votes were found in the State of Ohio, despite the intensive voter education efforts in which the state engaged in an effort to prevent invalid votes from being cast on punch cards.

**3. The Continuing Use of Error-Prone Voting Equipment Cannot Survive Equal Protection Scrutiny Because it is Not Necessary to Serve a Compelling State Interest**

As Defendants have acknowledged, election practices that have an impact on the fundamental right to vote are subject to strict scrutiny, and may only be upheld if the Defendants can establish that they are “necessary to promote a compelling state interest.” Mixon v. NAACP, 193 F.3d 389, 402 (6th Cir. 1999). The Defendants have never asserted that their continuing use of error-prone voting technology is necessary to serve a compelling state interest, presumably because they realize they cannot carry the heavy burden that this standard requires. Indeed, throughout this litigation the Defendants have conceded, in their HAVA plan and elsewhere, that the use of punch card and non-notice election is deeply problematic and that it needs to be replaced with less error prone equipment. For example, Defendant Blackwell has acknowledged that the State of Ohio’s failure to replace the punch card as the state’s principal voting

method “invites a Florida-like calamity.” See Exhibit 24. Referring specifically to this litigation, Secretary Blackwell candidly admitted that the ongoing legislative foot-dragging in providing funds to upgrade Ohio’s voting system “proves only to support the plaintiff’s concerns that Ohio is not serious about [Help America Vote Act] implementation and will likely be used in support of a plaintiff’s motion to win immediate judgment.” See Letter of J. Kenneth Blackwell to Honorable Doug White (Exhibit 24), at 3. These statements support the idea that Ohio has a compelling interest in replacing—not maintaining—its punch card and optical scan systems.

Yet despite the admitted inadequacy of Ohio’s existing voting systems and the pendency of this litigation, the state has still failed to replace them, even though over 70% of Ohio’s voters are still using punch card voting equipment. 155:3-5. The ongoing discrimination that results from the Defendants’ continuing approval of and use of unreliable voting equipment cannot withstand strict scrutiny. As noted above, strict scrutiny places the burden on the Defendants to establish that the requirement that Plaintiffs vote on error-prone equipment furthers a *compelling* state interest. This the Defendants cannot do. Defendants have suggested only that there are “rational reasons” for the state to continue using unreliable equipment in some counties but not others. But even under rational basis review – let alone the strict scrutiny standard that equal protection doctrine requires – these interests are clearly insufficient.

Defendants have proffered three justifications for their approval and implementation of a dual voting system. First, the Defendants have claimed that prior to this litigation, they were ignorant of the defects in punch card voting. There are reasons to doubt the veracity of this claim, but even if the Defendants claim of pre-2000 ignorance is to be credited, it cannot provide even a rational justification for the continuing use of the very error-prone equipment that the Defendants themselves now concede should be replaced. At the

most, the Defendants' alleged ignorance might provide a "good faith" defense to a claim of *damages* for the violation of Plaintiffs' constitutional rights. But Plaintiffs have not asserted a claim for damages, and there is no "good faith" defense to a claim of equitable relief. Flagner v. Wilkinson, 241 F.3d 475, 483 (6th Cir. 2001), cert. denied, 534 U.S. 1071 (2001).

The second justification advanced by the Defendants is just as constitutionally inadequate as the first. The Defendants have argued that they are justified in maintaining a system that discriminates against the Plaintiffs because it would cost money to change to a system that treats all voters equally. Defs. MSJ (Doc. 173) at 22 ("The preservation of taxpayers' money, naturally, is a rational basis for a State or County to certify, purchase, or maintain a particular type of voting machine."). This explanation can be rejected out of hand, given the Secretary of State's acknowledgement that the state already has some \$132 million in federal funds in the bank to upgrade its election system. 164:7-10. The Secretary of State estimates that the replacement of existing voting machines in all 88 counties (including counties that are *not* subject to this lawsuit) is only \$110 million. 165:18-25. Moreover, cost savings is not a justification for an ongoing constitutional violation, particularly where the fundamental right to vote is at issue. See, e.g., Frontiero v. Richardson, 411 U.S. 677, 690 (1973)(plurality opinion)("[W]hen we enter the realm of 'strict judicial scrutiny' there can be no doubt that 'administrative convenience' is no shibboleth, the mere recitation of which dictates constitutionality."); Shapiro v. Thompson, 394 U.S. 618, 633 (1969) (the savings of "costs cannot justify an otherwise invidious classification"); Memorial Hospital v. Maricopa County, 415 U.S. 250 (1974)(cost savings cannot justify classifications affecting a fundamental interest); Belitskus v. Pizzingrilli, 343 F.3d 632, 646-47 (3d Cir. 2003)(state interest in costs savings was not compelling and could not justify state election regulation); Stone v. City and County of San Francisco, 968 F.2d 850, 858 (9th Cir.

1992)(“[F]ederal courts have repeatedly held that financial constraints do not allow states to deprive persons of their constitutional rights.”)(citing cases). Accordingly, the Defendants’ cost-based arguments must be rejected.

Finally, the Defendants have suggested that they have still another “rational reason” for maintaining the current discriminatory system. Defs. MSJ (Doc. 173) at 22. In particular, they have argued that alleged security concerns associated with some of the potential replacement equipment (specifically, electronic touchscreens) justify their decision to continue to subject the Plaintiffs to unconstitutional discrimination. *Id.* at 22-23. Here again, the trial testimony of the Secretary of State’s own witnesses lays this argument to rest. As Mr. Walch testified, there have never been any instances of fraud in the State of Ohio with electronic voting technology. 156:17-19. The Secretary of State’s office has conducted an intensive investigation of the security of electronic voting, and reached the conclusion that this technology can securely be implemented even without a Voter Verified Paper Audit Trail which will be required effective 2006. 142:15-24. Moreover, Plaintiffs do not argue that the Defendants are compelled to switch to touchscreens or any other particular type of equipment, but simply that they must eliminate the massive inter-county disparities that arise from the use of non-notice systems in some but not all counties. Nothing in Plaintiffs’ arguments, for example, would preclude Defendants from moving to a precinct-count optical scan system throughout the state. Defendants’ remedial argument is therefore a red herring, and does not justify their continuing authorization and implementation of a dual voting system in the State of Ohio. There is, accordingly, no rational – let alone compelling – interest for continuing to use punch cards and other unreliable equipment.

**B. The Continuing Use of Error-Prone Voting Equipment Deprives Ohio Voters of the Opportunity to Have Their Votes Counted Without Any**

### **Rational Justification in Violation of the Due Process Clause of the Fourteenth Amendment**

Based on the same evidence identified above, the continuing use of unreliable voting equipment denies due process. In the voting context, as the Court noted in Bush v. Gore, 531 U.S. at 105, the Constitution embodies a “minimum requirement for nonarbitrary treatment of voters necessary to secure the fundamental right.” When a state extends the right to vote to its citizens, it must not only comply with the Equal Protection Clause, but must also assure the Due Process Clause’s “rudimentary requirements...of fundamental fairness” are satisfied. Id. at 109. In Black v. McGuffage, the court addressed an Illinois voting system that, much like Ohio’s, relied extensively on punch card equipment that produces significant numbers of residual votes. Noting that “the right of suffrage is a fundamental matter in a free and democratic society,” 209 F. Supp. 2d at 900, the court concluded that a system for registering and tabulating votes that resulted in a situation where “the votes cast in some districts will have a significantly greater chance of being counted than votes cast in neighboring election districts” would be “irrational” and would give rise to a due process violation. Id. at 900-01.

In this case, Defendants have created, maintained, and operated a system that largely has relied upon the use of error prone voting equipment, a system they have long known would subject thousands of voters, including the Plaintiffs, to a significant and unreasonably great risk that their votes would not be counted. Such a system arbitrarily deprives the Plaintiffs of one of their most cherished of constitutional liberties, the right to vote. This system cannot be justified by any legitimate government interest and therefore violates due process.

**V. DEFENDANTS' CERTIFICATION AND USE OF NON-NOTICE PUNCH CARD MACHINES IN HAMILTON, SUMMIT, AND MONTGOMERY COUNTIES VIOLATES § 2 OF THE VOTING RIGHTS ACT**

**A. Plaintiffs have standing to raise vote denial claim.**

Plaintiffs Slater, Randall, Stewart and Somerville, who are required to use punch cards, have standing to bring a vote denial claim under Section 2 of the Voting Rights Act because the evidence shows that African-American voters using punchcard machines in Hamilton, Montgomery and Summit Counties are more likely to cast invalid votes than white voters within the same counties. Defendants have alleged at various times throughout this litigation that the Section 2 Plaintiffs lack standing because they cannot prove that their ballots were discarded due to residual balloting problems. This proposition is unsound. Due to the privacy of the ballot, no voter is able to conclusively prove that his or her ballot was one of the ones discarded by the voting technology. However, the evidence has clearly established that somebody is casting residual ballots in these three counties and that there is a correlation between the race of the voter and the rate of residual ballots. Thus, some voters are going to be injured, and there is nothing speculative or hypothetical about the injury, nor the risk imposed on those who use punch cards. Analogously, courts have found that a general injury to the environment is sufficient to support standing to any person who uses the affected environment. Sierra Club v. Morton, 405 U.S. 727 (1972); Friends of the Earth, Inc. v. Laidlaw, 528 U.S. 167 (2000). Similarly, any person who uses the infected punch card environment should also have standing. See also Village of Elk Grove v. Evans, 997 F.2d 328, 329 (7th Cir. 1993) ("even a small probability of injury is sufficient to create a case or controversy--to take a suit out of the category of the hypothetical--provided of course that the relief sought would, if granted, reduce the probability"). Other courts have found standing for plaintiffs bringing Section 2 challenges to voting technology. See, e.g., Black

v. McGuffage, 209 F. Supp. 2d 889 (N.D. Ill. 2002); see also Sandusky County Democratic Party v. Blackwell, 2004 WL 238445, at \*6 (6th Cir. Oct. 26, 2004) (plaintiffs have standing to challenge provisional ballot rules even if uncertain whether his or her individual ballot would be discarded). Denying standing to anyone exposed to punch cards would make it impossible ever to challenge the system as denying the equal right to vote.

**B. Defendants have committed vote denial by engaging in a state practice that, interacting with social and historical circumstances, results in significant intra-county racial disparities in the ability of African-American voters to have their votes counted in the Defendant Counties.**

**1. The right to vote in the Voting Rights Act includes the right to have one's vote counted.**

The Voting Rights Act (VRA) defines the right to vote protected by § 2 as follows:

(1) The terms "vote" or "voting" shall include *all action necessary* to make a vote *effective* in any primary, special, or general election, including, but not limited to, registration, listing pursuant to this subchapter, or other action required by law prerequisite to voting, casting a ballot, and *having such ballot counted properly and included in the appropriate totals of votes cast* with respect to candidates for public or party office and propositions for which votes are received in an election.

42 U.S.C. §1973l(c) (emphases added). While the courts and Congress have long recognized that “the right of suffrage can be denied by a debasement or dilution of the weight of a citizen’s vote just as effectively as by wholly prohibiting the free exercise of the franchise,” Reynolds, 377 U.S. at 555, a core aspect of the right to vote protected by the Voting Rights Act includes, at a minimum, the proper counting and totaling of votes cast.<sup>10</sup> Protection against racially disparate exclusion of votes cast in the tallying of those votes falls

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<sup>10</sup> Defendants are simply wrong when they argue that Plaintiffs do not state a vote denial claim by showing that their votes are less likely to be counted. Defs.’ Reply Br. Supp. Mot. Summ. J., (Doc. 198), 4 (claiming that Plaintiffs were not denied the right to vote after having registering and casting a ballot).

squarely within the scope of the right to vote that § 2 protects.

Defendants confused the nature of the claims against them from the outset of this trial. The right to vote, as protected by the Fourteenth Amendment and Section 2, encompasses not only the right to register, to enter the polls, to have assistance from poll worker, to receive a ballot and to cast that ballot, but the right to have that ballot counted. Therefore, Defendants cannot find refuge in the fact that Plaintiffs were able to enter the polls, receive help from poll workers, and receive a ballot. See, e.g., Joint Supplemental Stipulations ¶¶86-89 (Doc. 244); 34:15-22. The nature of this claim is that the election technology has resulted in black voters losing the effectiveness of their franchise. There is no need to have an election official refuse a registration, or a poll worker refuse to give or receive a ballot; the technology accomplishes the same objective.

**2. Proof of vote denial requires only three elements: (a) state action with respect to an electoral practice or procedure, (b) racial disparities in the ability to cast one's vote or have it counted, and (c) a causal relationship between the state action and the observed disparities.**

Section 2 of the VRA provides:

(a) No voting qualification or prerequisite to voting or **standard, practice, or procedure** shall be imposed or applied by any State or political subdivision in a manner which **results in a denial or abridgement** of the right of any citizen of the United States to vote **on account of race or color**, or in contravention of the guarantees set forth in section 1973b(f)(2) of this title, as provided in subsection (b) of this section.

(b) A violation of subsection (a) of this section is established if, based on the totality of circumstances, it is shown that the political processes leading to nomination or election in the State or political subdivision are not equally open to participation by members of a class of citizens protected by subsection (a) of this section in that its members have less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice. The extent to which members of a protected class have been elected to office in the State or political subdivision is one circumstance which may be considered: *Provided*, That nothing in this section establishes a right to have members of a protected class elected in numbers equal to their

proportion in the population.

42 U.S.C. § 1973 (emphases added). Well before the 1982 amendments, and consistently thereafter, courts have interpreted § 2 to require proof of only three elements in order to establish a vote denial claim (i.e., where an electoral practice results in racially selective interference with the ability to cast a vote or have it counted properly).<sup>11</sup> That is, courts will find a vote denial violation of § 2 once Plaintiffs have proved that (a) state officials, or officials of any political subdivision,<sup>12</sup> have engaged in an electoral “standard, practice, or procedure”<sup>13</sup> (b) resulting in a racially disparate ability to cast ballots or have them properly counted, (c) as long as the electoral practice, interacting with social and historical circumstances, causes the racial disparity in access or counting. See, e.g., Brown v. Post, 279 F. Supp. 60, 62 (W.D. La. 1968) (election officials providing racially disparate access to absentee ballots violated § 2); United States v. Post, 297 F. Supp. 46, 49 (W.D. La. 1969) (election officials changed the operation of voting machines without adequately informing both black and white voters, resulting in increased difficulty for residents of a special districts—who were predominantly black—to have their votes counted, in violation of § 2); Toney v. White, 488 F.2d 310, 312 (5th Cir. 1973) (registrar conducted an illegal purge of registered voters, affecting more blacks than whites, in violation of § 2); Goodloe v. Madison County Bd. of Election Comm’rs, 610 F.

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<sup>11</sup> Of course, the primary motivation behind the 1982 amendments was to clarify the elements of proof needed in vote dilution claims (i.e., where an electoral practice results in racially unequal valuation of votes properly cast and counted). See, e.g., S.Rep. 97-417 at 10 (seeking to respond to the shift in state practice “from direct, over[t] impediments to the right to vote to more sophisticated devices that dilute minority strength”); id. at 26 (discussing the cessation of litigation of vote dilution claims after City of Mobile v. Bolden, 446 U.S. 55 (1980) adopted the intent standard).

<sup>12</sup> Hereinafter, “state action” or “state officials” will also refer to county officials.

<sup>13</sup> This element should not be misconstrued to require a statewide election practice or inter-district comparisons. Most vote denial cases involve challenges to local elections and local practices. See, Irby v. Virginia State Bd. of Elections, United States v. Post, Roberts v. Wamser, United States v. Jones, Brown v. Post, Goodloe v. Madison County Bd. of Election Com’rs, and Welch v. McKenzie, inter alia, infra. While some of these cases found violations and others did not, *none* required the existence of a statewide practice or the finding of an inter-district disparity. § 2 applies to all “political subdivision[s],” without qualification. 42 U.S.C. §1973. *Intra-district* racial disparities caused by *intra-district* electoral practices—here, the selection and use of punch-card machines—violate § 2 just as surely as do statewide practices.

Supp. 240 (S.D. Miss. 1985) (election officials summarily invalidated 250 absentee ballots, virtually all of which were cast by black voters, upon discovering that four absentee ballots were improperly submitted, in violation of § 2); Irby v. Virginia State Bd. of Elections, 889 F.2d 1352, 1358 (4th Cir. 1989) (there was no violation of § 2 when officials shifted from an election to an appointment process because that shift was not casually responsible for black underrepresentation on the school board); Roberts v. Warner, 679 F. Supp. 1513 (E.D. Mo. 1987) rev'd. (for lack of standing) 883 F.2d 617 (8th Cir. 1989) (the summary refusal to review for a recount ballots rejected by punch card machines violated § 2 because voters in wards that used those machines were predominantly black); Mississippi State Chapter, Operation PUSH v. Allain, 674 F. Supp. 1245 (N.D. Miss. 1987), aff'd. sub nom. PUSH v. Mabus, 932 F.2d 400 (5th Cir. 1991) (a dual registration requirement and the lack of satellite registration violated § 2 because these practices—combined with historical and social conditions such as racially disparate access to transportation and working hours—resulted in racially disparate access to registration); Harris v. Siegelman, 695 F. Supp. 517 (M.D. Ala. 1988) (limiting access to the polling booth to five minutes and requiring illiterate voters to affirm their illiteracy before getting assistance combined with historical and social conditions to result in racially disparate barriers to casting votes); Black v. McGuffrage, 209 F. Supp. 2d. 889 (N.D. Ill. 2002) (plaintiffs stated a claim under § 2 by showing that the state uses punch card machines, with higher rates of non-counted ballots, predominantly in counties with majority voting age populations that are African American or Latino); Southwest Voter Registration Educ. Project v. Shelley, 344 F.3d 914 (9th Cir. 2003) (plaintiffs made out a strong claim by showing that the state uses punch card machines, with higher rates of non-counted ballots, predominantly in counties with a majority of minority citizens); Farrakhan v. Washington, 338 F.3d 1009 (9th Cir. 2003) (lower court erred in failing to take into consideration how a

felon disenfranchisement statute interacts with historical and social conditions causing a racially disparate composition of the criminal justice system in order to result in racially disparate disenfranchisement of felons);. In each of these cases, the three elements of state involvement in an electoral practice,<sup>14</sup> racially disparate access to the ballot or racially disparate likelihood of having one's ballot count, and a causal link between the practice and the racial disparity were individually necessary and collectively sufficient to establish a vote denial violation.

To the extent that the 1982 amendments changed the elements of a vote denial claim, they made it *easier* to demonstrate causation by enabling the electoral practice to interact with the totality of circumstances to cause the racial disparity. See Chisom v. Roemer, 501 U.S. 380, 384-6 (1991) (“[T]he coverage provided by the 1982 amendment is coextensive with the coverage provided by the Act prior to 1982....” If anything, Congress wanted to “expand the coverage of § 2 by enacting the 1982 amendment.”); compare id. at 408 (Scalia, J., dissenting) (“nothing was lost from the prior coverage; *all* of the new “results” protection was add-on. The issue is not, therefore, ... whether Congress has cut back on coverage of the Voting Rights Act; the issue is how far it has extended it.”).

In Gingles, the Supreme Court insisted that courts perform a “searching practical evaluation of the ‘past and present reality’ when analyzing a § 2 violation.” Thornburg v. Gingles, 478 U.S. 30, 45 (1986). In the context of a dilution claim, this searching practical evaluation involves a preliminary finding of the so-called Gingles preconditions (numerosity/compactness, minority political cohesion, and white bloc voting) in order to ensure that the suspect electoral practice is causally responsible for the minority's diminished ability

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<sup>14</sup> Courts recognize that electoral practices can be episodic, informal, or even non-recurring. The touchstone is whether a state official substantially affects the implementation of the election system. See Brown, United States v. Post, Toney, Goodloe, and Roberts, supra.

“to participate in the political processes and to elect candidates of their choice.” *Id.* at 44 (quoting S.Rep. 97-417 at 27, 29). These preconditions are not necessary to determine whether an electoral practice that prevents access to the ballot or counting of ballots cast is causally responsible for diminished ability to participate in the political process and elect candidates of choice. *Any practice* that prevents access to the ballot or counting ballots cast, by definition, is causally responsible for diminished ability to participate in the political process and elect candidates of choice. *See Chisom*, 501 U.S. at 397 (“[A]ny abridgment of the opportunity of members of a protected class to participate in the political process *inevitably impairs* their ability to influence the outcome of an election.”). Since the inability to cast a ballot or to have it counted is a clear abridgment of the opportunity to participate in the political process which inevitably impairs the ability to influence election outcomes, no court has ever held that any of the *Gingles* preconditions is necessary to establish a vote denial claim.<sup>15</sup> *See* cases cited pp. 38-39, *supra*. In short, while a variety of factors may buttress a vote denial claim (including any of the Senate factors), the three elements—(a) state involvement in an electoral practice, (b) racial disparities in the casting or counting of votes, and (c) a causal relationship between the electoral practice, interacting with the social and historical circumstances, and the observed disparities—are individually necessary and collectively sufficient to establish a vote denial violation.

**3. The Defendants have engaged in state action with respect to an electoral practice or procedure.**

Ohio certifies punch card machines as an acceptable voting technology. Stipulations 12-13. Hamilton, Summit, and Montgomery Counties (hereinafter “Section 2 Defendant Counties”) select and operate these machines. Final Fact Stipulations ¶¶20, 32. The certification, selection, and use of punch

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<sup>15</sup> For the completeness of the factual record, some district courts have analyzed the preconditions without deciding that

card machines by the various state and county officials are clearly an election “standard, practice, or procedure.” Defendants’ conduct satisfies the first element of a vote denial claim.<sup>16</sup>

Defendants have repeatedly in the past confused the nature of the Section 2 claim raised against them. Summit, Montgomery and Hamilton Counties are being sued specifically for their intra-county racial disparities in residual ballots which are clear violations of Section 2 of the Voting Rights Act, 42 U.S.C. §1973. As these claims deal only with intra-county racial disparities, Summit, Hamilton and Montgomery Counties and the State Defendants have led this case down a path of irrelevance by comparing themselves to other counties and searching for inter-county disparities among themselves.

Perhaps because the Defendants never fully recognized the nature of the claims against them, they, and their hired expert, have accused Plaintiffs of selecting certain counties. Section 2 jurisprudence has an abundant number of cases of counties being sued for their own racial disparities. See, e.g., Exhibit 20.

Defendants have often attempted to seek refuge in the absence from this lawsuit of Cuyahoga County, another county in Ohio with African Americans voting on punchcards. See, e.g., Final Fact Stipulations, ¶¶41, 42. This argument suffers from the same fatal flaw that their expert’s research question suffers: Plaintiffs’ claims against the Defendants are for intra-county discrimination. Cuyahoga County’s

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they are necessary to denial claims. E.g., Roberts 679 F. Supp. at 1530.

<sup>16</sup> Hamilton County argues that while they did select and use punch card machines, any errors in counting ballots of African-Americans were inadvertent and did not itself constitute an election practice. Hamilton Response Pl. Mot. Summ. J. (Doc. 190), 8-9, relying on United States v. Jones, 57 F.3d 1020 (11th Cir. 1995). Yet, Jones is clearly distinguishable from the case at bar. In Jones, election officials wrongfully admitted out-of-district, predominantly white voters and improperly counted their votes. The court found no § 2 violation since the improper count was a unique inadvertent error unlikely to recur, not a “standard, practice, or procedure.” In Hamilton County, however, voters use the same punch card machines in election after election. Their officials willfully selected these machines. Though the errors associated with the machines may be inadvertent, the selection and repeated mandatory use of the machines surely constitutes an election practice or procedure, a practice which consistently causes discriminatory results. By claiming that Hamilton County officials are “not responsible for the errors they cannot control,” Hamilton is merely claiming they selected the punch card machines in good faith. Hamilton Response (Doc. 190), 9. But good faith is not a defense to a § 2 vote denial claim. See cases cited pp. 38-39, supra.

residual ballot rates are immaterial and irrelevant to what disparities exist *within* Summit, Hamilton and Montgomery Counties; it neither elucidates what African American voters in these defendant counties face, nor does it provide any viable defense for the Section 2 claim. The only reason that Plaintiffs include data from Franklin County – a non-defendant county – is to demonstrate that technology explains these unlawful disparate rates between the two racial groups within the counties and that selecting notice technology can eliminate these disparities. As discussed below, Franklin County is an urban county with roughly the same demographics as the defendant counties. See generally Engstrom Report (Exhibit 11). However, because the DREs used in Franklin County provide notice to the voter that he or she is casting undervotes and completely eliminates overvotes, the intra-county racial differences in residual balloting Franklin County is substantially less than the differences in the three defendant counties. Thus Franklin County is included to show that technology can address and remedy the harm caused by the racial disparities. Unlike the statistics and election results from Franklin County, Defendants' mention of Cuyahoga County does not demonstrate how such violations can be redressed.

Similarly, Defendants draw attention to high residual ballot rates found in predominately white rural or suburban counties in Ohio, such as Delaware or Holmes. See, e.g., Final Fact Stipulations ¶¶40, 43. Again the fact that rural white voters, who are not members of a protected class under the Voting Rights Act, might also be disfranchised by punch cards does not negate or defend against the intra-county disparities present in the three defendant counties. These three counties and the State Defendants are sued for their respective roles in the certification, selection, purchase, maintenance and continued utilization of technology that disfranchises African-American voters in violation of Section 2 of the Voting Rights Act.

Furthermore, comparisons between black voters in Hamilton County and white voters in Summit

County, see, e.g., 43:18-23, are irrelevant. The only comparison relevant for the Plaintiffs' Section 2 claim against Hamilton County is the difference between white Hamilton County voters and black Hamilton County voters. The only relevant comparison for Plaintiffs' Section 2 claim against Summit County is the comparison between white Summit County voters and black Summit County voters. The same is true for Montgomery County. These claims could have been brought as three separate cases against each county and the state defendants for their respective roles in utilizing a voting technology that violates Plaintiffs' voting rights under Section 2.

**4. African Americans suffer far higher rates of ballot rejection than do white voters in the Section 2 Defendant Counties.**

The statistics compiled by the parties' various experts clearly demonstrate a racial disparity in the opportunities to have one's vote count effectively, with many more African-Americans suffering nonvoted ballots in the Section 2 Defendant Counties. In order to study these racial disparities Plaintiffs counsel and Plaintiffs' expert Dr. Mark Salling compiled databases of the election results for the 2000 Presidential election for each precinct in the Section 2 Defendant Counties. See Exhibit 29 (database for Hamilton County, stipulated as accurate in Stipulations ¶¶ 34, 82); Exhibit 30 (database for Montgomery County, stipulated as accurate in Stipulations ¶¶34, 82); Exhibit 31 (database for Summit County, stipulated as accurate in Stipulations ¶¶34, 82); see also Exhibit 5 (Salling Expert Report on "Methods Used to Develop Census Data by Precinct"). These databases contained the number of residual ballots cast in each precinct in each of the Section 2 Defendant Counties (for Hamilton and Summit County, it was possible to segregate overvotes from undervotes for each precinct, this was not possible for Montgomery County at the precinct

level). The databases also contained information about the number of registered voters and racial demographic information from the Census for each precinct.<sup>17</sup> See Exhibit 5. These databases provided the underlying data for both Dr. Salling's and Dr. Engstrom's expert reports.

Similar to the discussion and testimony about the constitutional claims, there are substantially different phenomenon occurring in undervote statistics and overvote statistics. All the experts in this case have agreed that while undervoting can be a deliberate choice, overvoting is viewed as almost always a mistake. Furthermore, as Dr. Kropf has testified, a voter rarely goes to the polls for a presidential election and intentionally decides not to cast a vote for president. Therefore, the rate of intentional undervoting is very small. 107:9-11 (Kropf testimony). Yet, Dr. Kropf also testified that African Americans and whites do not cast intentional undervotes at a significantly different rate. 107:11-13. Therefore, "to the extent that there are differences between counties with higher levels of African Americans and counties with lower levels of African Americans and more whites, and it's related to voting equipment, that it's not necessarily just because African Americans happen to [intentionally] undervote at a higher rate." 107:15-22. The evidence in this case has shown – through the database prepared by Dr. Salling and the analysis he and Dr. Engstrom performed – that there are racial disparities within Hamilton County and Summit County regarding the number of undervotes cast in a presidential election and racial disparities within Montgomery County regarding the number of residual votes, the sum of both under and over votes. Based on Dr. Kropf's

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<sup>17</sup> Much was made at trial about the fact that the database contained no information about black registered voters and black voter turnout. First of all, no database about the racial composition of these voters is available, to Plaintiffs' experts or Defendants. While some states, predominantly in the South, are covered by laws requiring them to maintain racial statistics for voter registration, Ohio does not include such information on its registration forms. Therefore, Dr. Salling used the best available racial demographic information, and used black voting age population gathered from the 2000 census and applied it to the results for the 2000 election. Black voting age population is the population of blacks reporting for to the census that they are over 18 years of age. Furthermore, Dr. Salling's methodology and geographical expertise is relied upon not only by Plaintiffs for this case, but by the State of Ohio when reapportioning its legislative and congressional districts. See Exhibit 6 (Resume of Mark Salling). Undoubtedly, Dr. Salling's work here represents the

testimony and research about intentional undervoting and the fact that blacks do not intentionally undervote for president more or less than whites, these differences are due to some function of the equipment, and not the intent of the voters.

Q. -- in the presidential contest, if you saw something that said that there were residual vote rates that varied based on the type of equipment that you used, what would you think would be the cause of that disparity?

A. Probably the type of equipment, some problem with the equipment; in particular punch cards I've seen quite widely indicted for having problems. 108:1-8 (Kropf testimony).

Using these data, Dr. Mark Salling was able to demonstrate a strong correlation between precincts with high percentages of black voters and precincts with invalid ballots. For each county, Dr. Salling showed on maps he prepared which broke down the county into its municipalities and precincts. Dr. Salling was able to show where African Americans lived and voted, and he was able to show in which precincts residual ballots occurred. For each county, Dr. Salling was able to take a map of precincts and their residual ballot rates and superimpose where African Americans reside and visually demonstrate the correlation between race and the deleterious effects of punchcards.

For Summit County, Dr. Salling was able to show that a majority of African Americans who are of voting age reside in the City of Akron precincts, Barberton precincts, precincts north of Twinsburg, and precincts around Macedonia. Exhibit 52 (map of Race of Population of Summit County Precincts); 353:5-14 (Salling testimony). Dr. Salling was also able to show that the majority of overvotes cast in Summit County on the 2000 presidential ballot were cast in the City of Akron precincts, Barberton precincts and precincts near Twinsburg and in Boston Township. Exhibit 53 (map of Overs as Percent of Ballot in

Summit County). When Dr. Salling super-imposed where African American voters reside on this map, see Exhibit 63, he concluded, "Well, I see a strong geographic correlation between where the African American population is concentrated and where a good deal, at least, of the overvotes, percentage overvotes were concentrated, with some exceptions obviously." 376:2-5.

Further evidencing how strong this correlation is, Dr. Salling provides: (1) a "correlation coefficient," "a statistical measure of the degree of relationship between two variables [here percent black and percent overvotes]," 3382:7-8; and (2) a "scatterplot" which plots every precinct in the county on a graph showing the racial composition of the precinct and its overvote rate. It is:

an attempt to look at the relationship between those two variables. In general, when there is a strong relationship between them, one can see that as one value increases, so does the other and they appear as sort of a line of dots in one direction. When they are scattered, if you will, all over the place, it implies visually that there is little relationship between the two variables.

That relationship is measured by the correlation coefficient which I reported on earlier, so this is a visualization of what you get when you do a correlation coefficient calculation.

384:21 - 385:8. Generally, the higher the correlation coefficient, the higher the correlation between race and overvotes. For Summit County, the correlation coefficient is 0.682, see 389:11, indicating a strong correlation between race and overvotes.

Hamilton County shows very similar results. His map for Hamilton County, exhibit 43, indicates that "[c]learly there's a concentration of African Americans in the City of Cincinnati and some northern suburbs up here, as well as some in sort of to the northeast." 377:15-17. Another map of Hamilton County shows the rate of overvotes for 2000 presidential ballots. Exhibit 42. Viewing this map, it is clear that "there does obviously seem to be a concentration of a high percentage of overvotes in parts of Cincinnati here, as well

as some other parts of the county and some out here. But there is obviously a large concentration in the city itself." 378:7-11. When Dr. Salling plotted where African American voters voted on this map, exhibit 64, it showed:

Well, it appears from a geographer's point of view that there is a geographic correlation between the two patterns, again with some exceptions, but this is one way that geographers assess the degree of correlation in two geographic patterns.

It's much like, in fact, what statisticians do when they compute correlation values comparing two sets of numbers. We're looking at the same kind of thing that a statistician would do to produce correlation number, coefficient, we're looking at it visually as a map. They represent the same thing.

379 8-18. Again, Dr. Salling provides a scatterplot, exhibit 60, and correlation coefficient of 0.696 indicating that there is a relationship between race and overvotes.

Regarding the relationship between race and overvoting in Hamilton and Summit Counties, Dr. Salling concludes: "Well, I think the maps, along with the scattergrams and the statistics, the correlation coefficient, all say the same thing. They say that there is a fairly strong relationship between where blacks live and where overvotes occur." 393:7-12.

For Montgomery County, Dr. Salling was able to map where the African American voting age population resides. In exhibit 47, he shows "the concentration of African Americans in the City of Dayton, for example, on the east side in particular extending into a suburb over here as well, a couple suburbs." 380:5-7. In exhibit 48, he shows where the residual votes were cast in Montgomery County: "Well, there's some concentration, I think, of percent residual again in the City of Dayton, but extending into some nearby suburbs, and then there are other parts of the county as well with relatively high proportions." 380:16-19. Superimposing where African American voting age person live on this map shows a similar, though not as

strong, correlation between race and residual ballots. See Exhibit 62. Again however, one must note that residual ballots here include those voters who intentionally did not cast a vote for president. Similarly, Dr. Salling provides a scatterplot for Montgomery County, Exhibit 58, and a correlation coefficient of 0.440. 385:11-14. Dr. Salling concludes based on all of his analysis for Montgomery County that: "there's a strong relationship between residual votes and percent black in Montgomery County." 393:17-18.

Though Dr. Salling's maps are compelling proof that black precincts have the highest rates of invalid votes, it does not show whether the African Americans or the whites in these precincts are casting the invalid ballots. This is known as the ecological fallacy – attributing certain qualities or behavior to individual voters based on aggregate (in this case precinct and county) data. Dr. Richard Engstrom, an icon and celebrated expert in the field of voting and racial minorities, see Exhibit 12 (curriculum vitae for Dr. Richard Engstrom), also analyzed the data that Dr. Salling compiled using at least two statistical methods (bivariate ecological regression and ecological inference) that address the ecological fallacy. See 373:13-15 (Salling testifying that he gave the database to Engstrom). However, Dr. Engstrom used three methods of statistical analysis to study the relationship between race and invalid votes within the three counties. See generally Final Fact Stipulation ¶35 (Doc. 234). He uses three different methods to do this: homogeneous precinct analysis, ecological regression, and ecological inference. All three of these methods are widely used to examine racial differences in voting behavior, although ecological regression and homogeneous precinct analysis are the two that have been approved and most widely employed by federal courts for use in voting rights cases. See Exhibit 20 (discussing the many courts that have relied upon bivariate ecological regression analysis ("ecological regression") and homogeneous precinct analysis in Section 2 cases). While soundly based in statistical theory, these three techniques are sophisticated versions of post-election

analysis. Each looks at precincts with a specific demographic characteristic – in this case precincts where significant numbers of African Americans live – and observe what took place during the election.<sup>18</sup>

The results for all three statistical analyses for Hamilton County are as follows:

	African American Overvote %	Non-African American Overvote %	Difference (AA minus non-AA)
Overvotes			
EI	2.48	0.43	2.05
ER	2.65	0.34	2.31
HP	3.04	0.43	2.61
	African American Undervote %	Non-African American Undervote %	Difference (AA minus non-AA)
Undervotes			
EI	1.10	0.88	0.22
ER	1.53	0.78	0.75
HP	1.66	0.81	0.85

Engstrom Report, Exhibit 11, ¶¶10, 12

The results for Summit County are as follows:

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<sup>18</sup> A brief review of each method may be helpful. The first method, homogenous precinct or extreme case analysis, is a confirmatory technique that looks at how votes were cast in nearly all white or all black precincts. Customarily, precincts having more than 90 % black or white turnout are used. A determination can be made of how members of a particular race voted in each precinct from the election returns for the precinct. One of the most useful aspects of the homogeneous precinct analysis is that it is intuitively easy to understand and ascertain the results. It does not utilize any inference generated by statistics.

The second method, ecological regression, has been approved for use in voting rights cases by the Supreme Court. Thornburg v. Gingles, *supra*. By looking at all of the precincts in a county or other jurisdiction, ecological regression can detect if there is a relationship between the number of residual votes and the racial composition of the precinct. If there is a relationship, this method is able to produce an estimate of the percentage of white and black voters whose ballots contained residual votes.

The third method, ecological inference, is a more recent technique developed by Professor Gary King of Harvard University. The ecological inference technique estimates voter behavior by calculating minimum and maximum values of the percentage of blacks or whites who engaged in the behavior under study. These estimates are derived by taking hundreds of samples from each precinct and calculating confidence intervals to more accurately estimate the voting behavior in question.

	African American Overvote %	Non-African American Overvote %	Difference (AA minus non-AA)
Overvotes			
EI	4.83	0.30	4.53
ER	2.88	0.39	2.49
HP	2.89	0.46	2.43
	African American Undervote %	Non-African American Undervote %	Difference (AA minus non-AA)
Undervotes			
EI	6.86	2.22	4.64
ER	5.08	2.29	2.79
HP	4.76	2.33	2.43

Id., ¶¶10,12.

The results for under and over voting combined in Montgomery County are as follows:

	African American Over and Under %	Non-African American Over and Under %	Difference (AA minus non-AA)
Montgomery			
EI	5.33	2.09	3.24
ER	5.54	2.08	3.46
HP	5.35	2.18	3.17

Id., ¶14.

In Hamilton County, African-American voters have their ballots rejected at *nearly seven times* the rate that non-African-Americans do, due to overvoting; African-Americans also cast ballots that result in total undervotes at *nearly twice* the rate that non-African-Americans do. Final Fact Stipulations ¶¶ 36-38 (approving Engstrom’s findings on overvotes and undervotes in Section 2 Defendant Counties).<sup>19</sup> Adjusting

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<sup>19</sup> This fractional disparity is calculated by taking the average of the rate of overvotes and undervotes, respectively, calculated by the three methods (HP, ER, and EI) for blacks and dividing that number by the same average calculated for

for the rate of intentional undervotes based on the testimony of Dr. Kropf, African-Americans in Hamilton County suffer accidental (i.e., unintentional) undervotes at *seven-and-a-half times* the rate that non-African American voters do. See Kropf Report (Exhibit 1), ¶¶8-10 and Appendix I: Racial Disparities by County in Residual Data, infra. Similarly, in Summit County, African-Americans suffer overvotes at *over nine times* the rate that non-African-Americans do; they suffer total undervotes at about *two-and-a-half times* the rate that non-African-Americans do; and they suffer unintentional undervotes at *over three times* the rate that non-African Americans do. In Montgomery County, Plaintiffs do not have statistics disaggregated by overvotes and undervotes, but African-Americans suffer residual ballots about *two-and-a-half times* as often as non-African-Americans do. These figures are summarized in Appendix I: Racial Disparities by County in Residual Data, infra.<sup>20</sup>

The evidence presented by the Plaintiffs overwhelmingly shows that African Americans in Summit, Montgomery and Hamilton Counties bear a disproportionate burden of the flaws of the punchcard and have their ballots discarded a much higher rates than whites in the same counties. The Defendants have presented no reliable evidence to refute the findings of the Plaintiffs. Indeed, as discussed earlier, their own lay witnesses corroborate what the Plaintiffs have shown. Furthermore, their expert, Dr. Lott, conducted a study that never specifically addressed the intra-county racial disparities; he does not address the complaint of the Plaintiffs that blacks and whites within these three defendants counties have disparate rates of residual ballots (for Montgomery County) and overvotes (for Summit and Hamilton Counties). His statewide comparison across types of technology cannot address or refute this problem. Dr. Lott offered no opinion

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whites. For Hamilton overvotes, the exact number is 6.808. For Hamilton undervotes, it is 1.737. Summit overvotes—9.217; Summit undervotes—2.442. Montgomery residual votes—2.554.

<sup>20</sup> Dr. Lott's data, approved by Stipulation 26, supports this finding as well. See also 633:13-639:4 (Lott cross-examination regarding R-24).

on what specifically occurred in Summit, Hamilton or Montgomery Counties. See generally Lott Report (Exhibit R); see also 904: 11-905:12 (Kropf testimony, concluding that Dr. Lott's study does not rebut the findings of Dr. Salling and Dr. Engstrom with respect to Plaintiffs' Section 2 claims because he does not separate overvotes from undervotes and does not present specific findings with respect to the three Defendant counties). In fact, as Dr. Lott testified, he does not have complete or accurate data for Hamilton County in his data. 629:12-630: 4 (Lott testimony). These three county defendants therefore have no evidence in defense to the findings of Dr. Engstrom and Dr. Salling.

However, Dr. Lott's analysis of black voting behavior statewide is also fraught with errors and omissions. Most tellingly, Dr. Lott is missing data from entire counties, including counties containing significant concentrations of African American voters, such as Mahoning (containing Youngstown) and even Hamilton, a county who is a party to this lawsuit for its apparent Section 2 violations. See 629:12-632:11 (Lott testimony about complications with his data); 903: 18- 904: 10 (Kropf testimony about Lott's database missing data). Therefore, Dr. Lott did not even analyze Hamilton County election results and cannot offer an opinion on the racial disparities for that county. According to Dr. Kropf, the effect of these omissions on his conclusions is:

[A]rguably if you take out some wards that are African-American or have high levels of African American [sic], you could have a smaller chance of finding, or of drawing a conclusion about African Americans. The reason why I say that is because there really is such a small number of wards that have higher concentrations of African Americans. 904:2-10.

As discussed above, Dr. Lott's choice of variables for his panel design, the choice of ward-based geography, the selection errors in his "Top 10% of wards," and the problem of multicollinearity in his study

undermine any conclusions he attempts to draw about the relationships between technology and racial disparities. See pp.13, 15, 19-22, supra.

Furthermore, Dr. Lott cannot even attempt to refute the disparate impact at the top of the ballot. By Dr. Lott's own admission, he agrees that African Americans cast more residual ballots at the presidential level. However, he claims that his approach is superior by focusing his effort on trying to show that punch cards had no negative impact on the down ticket contests. Dr. Lott's own data, and his specific testimony under oath supports the conclusion that both at the top of the ballot and in down-ballot races African Americans in Ohio have a higher residual ballot rate for punch card equipment than non-African Americans. Lott Report (Exhibit R), Table 4; 632:13-636:4 (Lott cross examination about Table 4).

**Table 4: Comparing How Non-voted Ballot Rates Vary by Type of Race and Race of Voter**

	Rate of Non-voted Ballots and How Statistically Significantly Different these Wards are				
	All Wards	Wards that are 100% White	Top 10% of Wards by Percent White Population	Top 10% of Wards by Percent Black Population	Top 10% of Wards by Percent Hispanic Pop.
<b>President</b>	.0225	.03099	.0285	.0282	.0207
t-statistic that this group of wards is different from All Wards		2.61**	7.70**	8.201**	* 2.675**
t-statistic that this group of wards is different from 100% White Wards				.9360	4.4353**
t-statistic that this group of wards is different from top10% White Wards				.1909	5.2972**
<b>U.S. Senate</b>	.0567	.0634	.0553	.0850	.05455
t-statistic that this group of wards is different from All Wards		.882	.8640	15.525**	1.2509
t-statistic that this group of wards is different from 100% White Wards				2.084**	1.4142
t-statistic that this group of wards is different from top10% White Wards				9.607**	.2656
<b>Congress</b>	.0724	.0610	.0823	.0769	.0859
t-statistic that this group of wards is different from All Wards		1.216	4.931**	2.2026**	6.2202**
t-statistic that this group of wards is different from 100% White Wards				2.0253**	1.7303*
t-statistic that this group of wards is different from top10% White Wards				1.8908*	.9694
<b>State Senate <sup>√</sup></b>	.1183	.1163	.1191	.1568	.1383
t-statistic that this group of wards is different from All Wards		.3501	.1933	7.040**	3.8512**
t-statistic that this group of wards is different from 100% White Wards				1.5085	1.2015
t-statistic that this group of wards is different from top10% White Wards				4.6572**	2.8639**
<b>State House</b>	.1013	.0872	.0863	.1390	.0971
t-statistic that this group of wards is different from All Wards		1.115	5.8166**	13.590**	1.5456
t-statistic that this group of wards is different from 100% White Wards				3.6807**	.8860
t-statistic that this group of wards is different from top10% White Wards				14.809**	3.4353**
<b>Measuring "Voter Fatigue" By Race: Largest change in Non-voted ballots between Presidential Race and Race with Most Non-voted Ballots</b>	<b>9.58</b>	<b>8.53</b>	<b>9.06</b>	<b>12.86</b>	<b>11.76</b>

\*\*Statistically significant at least at the 5 percent level for a two-tailed t-test.

\*Statistically significant at least at the 10 percent level for a two-tailed t-test.

<sup>√</sup>The top 10 percent of wards differs here since only half the districts hold elections during these years.

Exhibit R (Lott Report), table 4. Overwhelmingly clear is the fact that blacks have a higher residual ballot rates than whites for each down ballot electoral contest on the ballot, with the exception of the US

Congressional contest, which is a statistically insignificant value. See pp. 20-21, infra, and footnote 21 and text surrounding, supra.

It is almost beside the point that Dr. Lott's expert report is unreliable when measured by the research standards of social scientists,<sup>21</sup> and that his analysis is based on statistical procedures that have not been relied upon by any federal court confronting voting rights issues. His conclusions are not supported by his own data. Not only are his conclusions inaccurate, but he contradicts himself. He concluded that, “[g]enerally, heavily white wards tend to have higher nonvoted ballot rates at the top ten percent of the districts with either Hispanic or adult African-American populations.” Lott Report (Exhibit R), at 6 – 7. But clearly the empirical findings in Table Four indicate that African American voters exhibit *higher* levels of residual balloting at the bottom of the ballot than do white voters. See Exhibit R-24, Table 4.

Contrary to Dr. Lott’s confusing and unsupported thesis, his statistical analysis and study offer further proof that the African Americans he studied across the three election cycles cast more spoiled ballots than their white counterparts. See Exhibit R, table 4. The discrepancies between his evidence and the conclusions he drew from that evidence were proven during trial. His conclusions are refuted by the evidence by Dr. Salling, Dr. Asher (Exhibits BB, CC), and Dr. Engstrom. His conclusions are refuted by

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<sup>21</sup> Dr. Lott purports to study the differences in rates of nonvoted ballots between African Americans and whites. See Lott Report (Exhibit R), Tables 5, 6. However, his conclusions are so weak that it may be due to just chance. Plaintiffs' expert Dr. Kropf testified that the conventional and generally accepted cutoff for statistical significance is .05. See 878: 22-25. "Researchers generally accept as reliable results for which statistical significance equals or exceeds the conventional standards of either .05 (corresponding to a five in one-hundred probability of obtaining results from chance or random factors) or .01 (corresponding to a one in one-hundred probability)." Garza v. County of Los Angeles, 756 F.Supp. 1298, 1336 (C.D. Cal. 1990); see also Chava Frankfort-Nachmias and David Nachmias, Research Methods in the Social Sciences (1996) ("Most researchers in the social sciences set their significance levels at .05 or .01."); Fed. R. Evid. 702 (experts may testify if ... "(2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the case."). None of Dr. Lott's F-tests in Table Six (Exhibit R-26) comparing whites to African-Americans show significance at this level and his t tests measuring significance for Table 4 also contain levels higher than .05, most notably his comparisons for blacks and whites voting in the US Congressional race, coincidentally, the only contest in his analysis that suggest that blacks have a lower residual vote rate. See also text in this brief at pp. 20-21.

the basic audit conducted by the chairman of the Hamilton County Board of Elections. See Letters of Timothy Burke (Exhibit 19); Joint Suppl. Stipulations, ¶80. Furthermore, no other scholar has reached the same conclusions that Dr. Lott has reached. Across the nation, scholars have found that African Americans cast more residual ballots than whites. See Tr. pp. 926-934 (Kropf testimony discussing that. Lichtman; Sinclair and Alvarez; and Tomz and Van Houweling have all found a racial gap between blacks and whites). There is simply no other conclusion here: African American voters are disproportionately disfranchised by the use of the punchcard than white voters in Summit, Hamilton and Montgomery Counties.

**5. Given the totality of the circumstances, Plaintiffs demonstrate that the use of punchcards lead to racially disparate rates of invalid ballots.**

**a. Comparison between Franklin County and Defendant Counties demonstrates that notice technology reduces racial disparities.**

The Section 2 Defendant Counties' use of punch cards allows socioeconomic disparities<sup>22</sup> between racial groups to result in racial disparities in the rates of nonvoted ballots. The Court heard extensive evidence showing that blacks in each of the Section 2 counties lag behind their white neighbors in every socioeconomic indicator reported in the Census. Tr. pp. 336-341 (Dr. Salling testimony regarding the Socioeconomic indicators for Hamilton County); Exhibit 32 (Summary and Charts of Socioeconomic Census Data for Hamilton County); pp. 342-344 (Dr. Salling testimony regarding the socio economic indicators for Montgomery County); Exhibit 33 (Summary and Charts of Socioeconomic Census Data for Montgomery County); 345: 1-13 (Court discussion regarding socioeconomic indicators for Summit County); Exhibit 34 (Summary and Charts of Socioeconomic Census Data for Montgomery County). This

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<sup>22</sup> Final Fact Stipulation, ¶ 33.

testimony and these exhibits show that racial gaps exist in the proportion of families headed by single parents, the proportion of children able to attend private schools, the level of education attained, unemployment rates, the size of the labor force, income levels, the proportion of people living under poverty, earnings, crowded housing conditions, access to telephones and transportation, plumbing, rental expenses and property values.

This causal relationship becomes apparent by comparing Franklin County, which is nearly identical to the Section 2 Defendant Counties in its racial distribution of relevant socioeconomic variables, see Final Fact Stipulation ¶33 (Doc. 234), to the Section 2 Defendant Counties. See Engstrom Report (Exhibit 11), ¶6 (showing the demographic similarities between the Defendant Counties and Franklin County). The material difference between the Section 2 Defendant Counties and Franklin County is the latter's use of DRE (Direct Record Electronic) voting machines that prevent overvoting and severely reduce undervoting by notifying voters when they fail to cast a vote for a particular race. Final Fact Stipulations ¶¶16, 23, 43 (Doc. 234). By employing voting technologies that nearly eliminate nonvoted ballots for all racial groups, Franklin County has minimized the racial disparities in the rate of nonvoted ballots.<sup>23</sup> On the other hand, by employing voting technologies that readily translate low socioeconomic indicators into relatively high rates of nonvoted ballots, the Section 2 Defendant Counties have employed machines that interact with those indicators to result in racial disparities in the rate of nonvoted ballots.

This interaction of inferior non-notice voting technology with socioeconomic racial disparities meets the "totality of circumstances" test of § 2 (b) for causation as applied to the vote denial context. 42 U.S.C.

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<sup>23</sup> For non-African Americans (whites), the rate becomes negligible, and for African-Americans it drops below 1%, nearly eliminating the racial gap in accidental undervotes. Engstrom Report (Exhibit 11), 8.

§ 1973(b). The Senate Judiciary Committee’s Committee Report makes clear that the Senate factors<sup>24</sup> that are generally probative of vote dilution need not apply straightforwardly or at all to cases of vote denial.

[Section 2] prohibits practices which, while episodic and not involving permanent structural barriers, result in the denial of equal access to *any phase of the electoral process for minority group members*.

If the challenged practice related to such a series of events or episodes, the proof sufficient to establish a violation would *not necessarily involve the same factors as the courts have utilized when dealing with permanent structural barriers*. Of course, the ultimate test would be the *White* standard codified by this amendment to Section 2: whether, in the particular situation, the practice *operated to deny the minority plaintiff an equal opportunity to participate and to elect candidates of their [sic.] choice*.

S.Rep. 97-417 at 30 (emphases added). The statistics recited above demonstrate unequivocally how punch card machines in the Section 2 Defendant Counties—but not in Franklin County where the only relevant difference is the use of notice technology—operate to deny the minority Plaintiffs an equal chance to have their votes counted and, therefore, an equal opportunity to participate in elections, which inevitably denies them an equal opportunity to elect their candidates of choice.

Even Defendants’ expert shows that blacks using notice technology have lower non-voted ballot rates than blacks using non-notice technology:

Q I said the non-voted ballot rates for blacks was lower using electronic voting than blacks using Datavote or Votomatics or lever machines.

A Okay.

Q And that is what you data shows, isn't that correct?

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<sup>24</sup>The “Senate factors” are the factors that the Senate discussed in its Committee Report that would typically add support to the finding that the totality of circumstances operated to deny minorities the opportunity to participate in the political process and to elect preferred representative. They include 1) a history of official discrimination; 2) racially polarized voting; 3) various suspect electoral practices; 4) denied access to the candidate slating process; 5) continued bearing of the effects of discrimination; 6) racial appeals in campaigns; 7) electoral success of minority candidates; [8] lack of responsiveness by officials to minority needs; and [9] the tenuousness of the policy supporting the suspect practice. S.Rep. 97-417 at 28-29.

A That's right. 654:25-655:6

See also, Exhibit R-26; footnote 21, supra (discussing statistical significance problems with Dr. Lott's analysis).

Not every racial disparity in access to the ballot or counting of ballots necessarily is caused by an electoral practice that violates § 2. Ortiz v. City of Philadelphia Office of City Commissioners Voter Registration Division, 824 F. Supp. 514, 539 (E.D.Pa. 1993) (“Not every incidental burden on the right to vote violates § 2.”) aff’d 28 F.3d 306 (3rd Cir. 1994).<sup>25</sup> In Wesley v. Collins, for example, the Sixth Circuit upheld Tennessee’s felon disenfranchisement statute. 791 F.2d 1255 (6th Cir. 1986). The court held that “the disproportionate impact suffered by black Tennesseans does not ‘result’” from the state’s disenfranchisement law, but rather from would-be black voters’ intentional decisions to commit crimes and, therefore, disenfranchise themselves.<sup>26</sup> Id. at 1262.

Nevertheless, Wesley and the more modern disfranchisement cases are distinguishable from the case at bar. Here, the racial disparities are not a result of any intentional conduct on the part of the

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<sup>25</sup> Ortiz went on to require that the suspect electoral practice be the “dispositive force” in causing the racial disparities in casting or counting ballots. Id. at 524. This stringent but-for requirement is certainly at odds with Gingles’s command to find a § 2 violation whenever the electoral practice “**interacts with** social and historical conditions to cause inequality in the opportunities” to participate in the electoral process. Gingles, 478 U.S. at 47 (emphasis added). Though a dispositive force, or but-for, version of the causation requirement is far more stringent than Gingles requires, Plaintiffs have met even this rigorous burden. By demonstrating that notice technology overcomes all of the socioeconomic differences between white and black voters virtually to eliminate any racial disparity in nonvoted ballots, Plaintiffs have shown that the non-notice technology employed in the Defendant Counties is clearly the “dispositive force” that allows the racially disparities in nonvoted ballot rates to deprive them of opportunities to participate in the political process.

<sup>26</sup> More recent considerations of felon disenfranchisement laws have declined to follow Wesley. E.g., Farrakhan v. Washington, 338 F.3d 1009 (9th Cir. 2003) (individual decision to commit a crime was not itself a bar to causal link between the disenfranchisement statute and the racial disparity in access to the ballot; indeed, the lower court erred in failing to take into consideration how a felon disenfranchisement statute interacts with historical and social conditions causing a racially disparate composition of the criminal justice system in order to result in racially disparate disenfranchisement of felons); Johnson v. Governor of State of Florida, 353 F.3d 1287 (11th Cir. 2003) (same).

Plaintiffs, or the class that they seek to represent. Even after accounting for intentional undervoting—which occurs at statistically indistinguishable rates for white and black voters, Kropf Report (Exhibit 1), ¶¶8-10—the racial disparities in overvoting and undervoting remain severe in Section 2 Defendant Counties. The remaining racial disparities in nonvoted ballots are due to machine error, outside the control of voters.

While Defendants argue otherwise, claiming that the remaining racial disparities are due to Plaintiffs' limited skill in voting or claiming that voters are too stupid to be able to use the technology, this argument comes too late in the day to be entertained seriously. E.g., Hamilton Answer (Doc. 120) ¶ 110; Montgomery Answer (Doc. 121), ¶ 16; Hamilton Response Mot. Summ. J. (Doc. 190), 9-10. Such an argument is analogous to a justification for literacy tests—if only the illiterate voters would learn to read, they could register to vote just like any one else. Yet it is not the Plaintiff-voters' duty to overcome facially neutral election practices or standards that, in practice, operate to make it much more difficult for minority voters to vote. As long ago as United States v. Post, courts have recognized that *election officials* have “the duty to refrain from engaging in conduct which involves or results in any distinction based upon race, and to refrain from applying any voting procedure which *will have the effect of denying to Negro voters the right to cast effective votes for the candidate of their choice.*” 297 F. Supp. 46, 50 (W.D. La. 1969) (emphasis added). While intentional choices to cast improper ballots may break the causal chain, limited skill in voting—tied, no doubt, to the socioeconomic disparities between black and white voters in the Section 2 Defendant Counties—does not.

In sum, because punch card machines interact with socioeconomic differences between blacks and whites to result in racially disparate rates of nonvoted ballots, while notice voting machines eliminate those disparities, punch card machines meet the causation requirement outlined in § 2(b) and analyzed in Gingles.

**b. Unlike in claims of vote dilution, Plaintiffs do not have to satisfy any of the Senate factors that are irrelevant to their vote denial claims.**

Throughout trial, Defendants have claimed that a mechanical proof of (some unspecified number of) the Senate factors is necessary to establish a vote denial violation. Yet, a mechanical recitation of the Senate factors has never been a part of vote denial jurisprudence. As discussed above, the very same Senate Judiciary Committee that enumerated the Senate factors in its report on the 1982 amendments also recognized that a vote denial “violation would not necessarily involve the same factors as the courts have utilized when dealing with permanent structural barriers.” S.Rep. 97-417 at 30. More importantly, no court has ever found any particular Senate factor (or group thereof) necessary to the disposition of a vote denial claim.<sup>27</sup> In fact, some courts that did consider the Senate factors explicitly disclaimed that those factors formed part of their holding. *E.g., Roberts*, 679 F. Supp. at 1530. Some courts considered the Senate factors and found them decidedly irrelevant. *E.g., PUSH*, 674 F. Supp. at 1264-1268 (polarized voting, suspect practices, candidate slating, and racial appeals are all irrelevant to vote denial; but a history of official discrimination, current discriminatory effects, lack of electoral success, representative unresponsiveness, and tenuous policies buttress a denial claim). Instead of mechanically marching through the nine Senate factors in check-list fashion, the courts apply a practical, context-sensitive, fact-intensive inquiry when considering which, if any, of the Senate factors help illuminate the totality of circumstances that allow the challenged electoral practice to cause discriminatory results.

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<sup>27</sup> *Irby*, *Black*, and *Shelley*, *supra*, did not discuss the Senate factors at all. *Siegelman* mentioned the factors, but investigated only the current extent of discriminatory effects, finding only that factor to be relevant. 695 F. Supp. at 528. *Farrakhan* mentioned the factors, but instead of applying any of the enumerated factors, it analyzed only the extent of racial discrimination in the criminal justice system, since only that was relevant. 338 F.3d at 1020. *Johnson* found the plaintiff’s evidence of a history of official discrimination, the use of suspect electoral practices, and the current effects of discrimination relevant and supportive, but made no factor dispositive. 353 F.3d at 1306.

Here, the continued effects of past discrimination and the tenuousness of the policy supporting the suspect practice are the only factors that are arguably relevant to the Plaintiffs' denial claim. Neither a history free of official discrimination, racially polarized voting, other suspect electoral practices, racial appeals in campaigns, the electoral success of minority candidates, nor responsiveness by officials to minority concerns will help ensure that African-American voters, including Plaintiffs, will cast ballots on punch card machines in Section 2 Defendant Counties that will be included in the vote tallies. Since none of those factors are probative of the likelihood that punch card ballots will be counted, none are relevant to Plaintiffs' § 2 vote denial claim.

**C. Defendants' purported legal defenses have no basis in vote denial jurisprudence.**

**1. Neither good faith nor inadvertent error is a defense to a vote denial claim.**

Defendants also err by claiming a defense of good faith or by demanding a showing of intentional discrimination. Hamilton Answer to Second Am. Compl. (Doc.120) ¶¶109, 111; Montgomery Answer (Doc. 121) ¶13; State Answer (Doc. 123) ¶27; Summit Answer (Doc. 124) Third Defense. No court has ever allowed good faith to be a defense to a vote denial claim, or required a showing of intentional discrimination on the part of the defendants in order to establish that claim. See cases cited supra pp. 38-39. Several courts have specifically held that good faith is not a defense to a § 2 claim. E.g., Brown, 279 F. Supp. at 63; Post, 297 F. Supp. at 51; Toney, 488 F.2d at 312; Welch v. McKenzie, 765 F.2d 1311, 1314 (5th Cir. 1985). Similarly, intentional discrimination had only a brief lifespan in § 2 jurisprudence. The primary purpose of the 1982 amendments to § 2 was to replace the intent test of City of Mobile v.

Bolden, 446 U.S. 55 (1980), with the prior results test of White v. Regester, 412 U.S. 755 (1973). Accord Thornburg v. Gingles, 478 U.S. 30, 35 (1986). Today, it could not be clearer that intentional discrimination is not an element of a § 2 vote denial claim.

## **2. Election success or failure is irrelevant to a denial claim.**

Finally, Defendants err by claiming Plaintiffs must show that “African-American voters in Ohio have not been able to elect their chosen candidate.” Defs.’ Mot. Summ. J. (Doc. 173), 10. While this factor may be useful to a dilution claim, it is irrelevant to a denial claim. Brown, 279 F. Supp. at 63 (finding a violation of § 2 although the “result of the election would not have been different had the final tabulation not included [illegally cast] absentee ballots” of white voters); Toney, 488 F.2d at 315 (setting aside the results of the contested election because the § 2 violation could “possibly” have affected the outcome, without deciding whether the effect on the election was an element of the violation itself); Goodloe, 610 F. Supp. at 242 (finding a § 2 violation when wrongfully invalidated ballots *may have*, but not necessarily would have, changed the results of the election). If plaintiffs here were contesting an election, this would be a relevant inquiry, but plaintiffs here do not. Election success may help prove that a minority voter’s ballot is not being valued with the same weight that a white voter’s ballot receives. But because the inability to have one’s vote count at all “inevitably impairs” the voter’s right to participate in elections and, thereby, elect candidates of choice, Chisom, 501 U.S. at 397, election success is completely irrelevant to a vote denial claim.

## **D. Conclusion**

Plaintiffs have proven that Defendants have engaged in a state practice that, interacting with social and historical circumstances, results in significant racial disparities in the ability of African-American voters to have their votes counted in the Section 2 Defendant Counties. Plaintiffs need not demonstrate continued

electoral defeat, any of the Gingles factors, nor even any of the Senate factors (although continued discriminatory effects in socioeconomic achievement and the tenuousness of the policy supporting punch cards do buttress Plaintiffs' claims). Finally, Defendants can find no safe harbor in defenses of good faith or inadvertent error—neither has any place in § 2 vote denial jurisprudence.

Respectfully submitted,

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This is to certify that a copy of the foregoing was served upon all counsel of record via electronic filing on this 15th day of November, 2004.

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