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**VIA FACSIMILE AND ELECTRONIC MAIL**

January 22, 2008

Neil Kelleher, Commissioner  
Douglas Kellner, Commissioner  
Evelyn Aquila, Commissioner  
Helena Moses Donohue, Commissioner  
Peter Kosinski, Co-Executive Director  
Stanley Zalen, Co-Executive Director

New York State Board of Elections  
40 Steuben Street  
Albany, NY 12207

Dear Commissioners and Co-Executive Directors,

We write to oppose any effort by the State Board of Elections to permit the authorization or purchase of full-face DREs as ballot marking devices. Scientific studies show that full-face DREs produce more residual votes than other voting systems compliant with the Help America Vote Act (“HAVA”) and that the lost votes disproportionately affect low-income voters and voters of color. The Brennan Center filed suit against the New York City Board of Elections because of discriminatory residual votes in 2000 and secured modifications to the City’s lever machines. We hope that further litigation will not be necessary to preclude New York counties from purchasing machines that potentially will disenfranchise hundreds of thousands of New Yorkers in violation of state and federal law.

It is our understanding that on the morning of January 23, 2008, the State Board will meet to vote on which voting systems counties may purchase to comply with Judge Gary L. Sharpe’s January 16, 2008 Order that counties must deploy ballot marking devices in every polling place this fall. We further understand that at least one of the systems the State Board will consider is a full-face DRE, or “touchscreen machine,” which presents every candidate, every race, and every ballot measure on a single, large computer screen. These full-face DREs will produce printed paper trails of voter choices that will presumably be the “ballots” to be counted by hand after the

polls have closed. This procedure stands in contrast with traditional ballot marking devices (also being considered by the State Board), which present voters with a “scrolling” computer interface that allows voters to consider a single race at a time, and uses that computer interface to mark a paper ballot that can later be read by an optical scan machine.

Based upon our extensive study of electronic voting systems, it is our judgment that any attempt to satisfy Judge Sharpe’s order by purchasing full-face DREs that have been modified to become “ballot marking devices” is not only misguided, but also a violation of state and federal constitutional provisions. Full-face DREs have repeatedly been shown to produce substantially higher lost vote rates than other voting systems, whether they are “scrolling” computer interfaces found on traditional ballot marking devices or hand-marked optical scan ballots. These differences are particularly pronounced among low-income voters and voters of color. There is no state interest sufficient to justify this discriminatory burden on the fundamental right to vote.

We also have serious concerns about whether any of the full-face DREs satisfy state and federal accessibility requirements. It is our understanding that, unlike the three ballot marking devices being considered by the State Board, none of the full-face DREs produce a paper ballot that can be independently and privately reviewed by voters with visual impairments and other disabilities. At the same time, research sponsored by the Brennan Center suggests that persons with reading disabilities may make many more errors on full-face DREs than other voting systems.<sup>1</sup>

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As you are aware, the New York State Board of Elections has broadly defined duties and responsibilities to ensure that federal and state election laws are enforced and that voters’ rights to cast their votes and have them counted are protected. The State Board must act to ensure that local boards of elections across the state comply with and implement the election laws of the State of New York and the Federal Government, including those laws governing the purchase and use of voting machines.

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<sup>1</sup> Lawrence Norden *et al.*, *THE MACHINERY OF DEMOCRACY: VOTING SYSTEM SECURITY, ACCESSIBILITY, USABILITY, AND COST* (Brennan Center for Justice ed., 2006), *available at* [http://www.brennancenter.org/content/resource/the\\_machinery\\_of\\_democracy\\_voting\\_system\\_security\\_accessibility\\_usability\\_a/](http://www.brennancenter.org/content/resource/the_machinery_of_democracy_voting_system_security_accessibility_usability_a/).

## I. Full Face DREs Produce Higher Lost Vote Rates, Particularly Among Low-Income and Minority Voters

Usability experts have long argued that, by presenting so much information on a single computer screen, full-face DREs are inherently confusing and thus are likely to cause more lost votes than other voting systems. An analysis of lost vote rates for the last several federal elections, conducted by Professor David Kimball of the University of Missouri, confirms this theory. In fact, full-face DREs have consistently produced higher residual vote rates than any other HAVA-compliant technology.

**Table 1:  
Lost Vote Rates by Voting Technology  
“Top of the Ticket” Races**

Year	Full-Face DRE	Scrolling DRE <sup>2</sup>	Optical Scan
2000	1.6%	—	0.9%
2002	2.2%	1.2%	1.3%
2004	1.2%	1.0%	0.7%

Based on studies of 1755 counties in 2000, 1270 counties in 2002, and 2215 counties in 2004. Source: Norden *et al.*, *supra* note 1, at 99.

A “lost vote” rate of 1.0% is generally expected in “top of the ticket” races. Some voters consciously choose not to vote for President, Senator or Governor. In 2000, 2002 and 2004, the lost vote rate for full-face DREs exceeded 1.0%. It also consistently exceeded the lost vote rate of precinct-based optical scan machines – by 0.5% to 1.0%. In New York State, this would represent between 35,000 and 70,000 extra lost votes.

<sup>2</sup> The State Board is not considering authorization of any scrolling DREs. We are providing residual vote rates for scrolling DREs for informational purposes. Traditional ballot marking devices use the same interface as scrolling DREs.

**Table 2:**  
**Ethnic and Economic Disparity in Lost Vote Rates by Voting Technology**  
**2004 Presidential Election**

<b>Composition of County</b>	<b>Full-Face DRE</b>	<b>Scrolling DRE</b>	<b>Optical Scan</b>
<i>Ethnic Composition</i>			
<b>Hispanic Voters</b>			
< 10% Hispanic	1.1%	1.0%	0.6%
10 – 30% Hispanic	1.1%	0.7%	0.9%
>30% Hispanic	2.0%	1.4%	1.2%
<i>Median Income</i>			
< \$25,000	2.8%	1.3%	1.4%
\$25,000 – 32,499	1.4%	1.1%	0.8%
\$32,500 – 40,000	1.3%	1.0%	0.7%
> \$40,000	0.9%	0.8%	0.7%

Based on a 2004 study of more than 2500 counties. Source: Norden *et al.*, *supra* note 1, at 101.

Usability experts have also long argued that voters who use computers less frequently than the general population, or who have adopted English as a second language – specifically, low-income and voters of color – would be disproportionately and negatively affected by having to vote on a full-face DRE because it presents a confusing computer interface. Again, the statistics bear out these concerns. In particular, the data show that if New York buys full-face DREs instead of Ballot Marking Devices and Optical Scans, the votes of close to an extra 1% of Hispanics and 1.5% of low-income voters as a whole may be lost in top of the ticket races.

**Table 3:**  
**Lost Vote Rate for State Ballot Initiatives by Voting Technology**  
**2004 General Election**

<b>Full-Face DRE</b>	<b><i>Nationwide Average</i></b>	<b>Scrolling DRE</b>	<b>Optical Scan</b>
15.4%	<b>9.3%</b>	6.3%	8.8%

Based on a study that reviewed results of 2042 counties in 2004.

Moreover, the lost vote rate increases as we move “down ballot.” On average, the votes of 15.4% of voters using full-face DREs were not counted for state ballot measures in 2004; by contrast, only 8.8% of voters using precinct count optical scan machines did not have votes counted for state ballot measures. Again, this difference in residual vote rates was significant *regardless of vendor*. This means, for instance, if New York City buys full-face DREs instead of Ballot Marking Devices and Optical Scans, it is likely to record 175,000 fewer votes on state ballot measures than it would if it chose the latter technologies.

## II. Full-Face DREs Do Not Produce An Accessible Paper Ballot

The *only* record of votes cast on full-face DREs used as ballot marking devices will be the paper trail. This is because the DREs’ counters will be turned off; there will be no electronic record of such votes. Given this fact, DREs used as ballot marking devices must provide a way for visually impaired and other disabled voters to review the paper trail privately and independently.

Section 301 of HAVA provides, in relevant part, that the accessible system must “be accessible for individuals with disabilities, *including nonvisual accessibility for the blind and visually impaired*, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.” (Emphasis added.)

Similarly, Section 7-202(1)(e) of New York election law states that a voting system approved by the State Board must “provide the voter an opportunity to privately and independently verify votes selected and the ability to privately and independently change such votes or correct any error before the ballot is cast and counted.”

We are aware of only one DRE being considered by the State Board that even purports to allow blind and visually impaired voters to privately and independently review the paper ballot. Unfortunately, it is our judgment that this full-face system, the LibertyVote (BMD) with EMS Liberty Control, will be inaccessible to an unacceptably large number of disabled voters.

In particular, it is difficult to imagine how voters with visual disabilities and any sort of mobility impairment will be able to use the system’s digital pen, which is meant to “read back” a voter’s choices through an audio interface. Based upon interviews with persons who have used the LibertyVote during public demonstrations, it is our understanding that to use this digital pen, a voter must place the paper record on some solid surface, connect the digital pen to her ear phones (requiring her to unplug her earphones from the DRE), and run the digital pen precisely over each line of the paper trail. Given the size of the type-font and the narrow width of the paper trail, it is our view that this would be an extremely challenging task even for voters without any visual or mobility impairments, let alone someone who was visually impaired and/or lacked fine motor skills. A voting system that makes it impossible for a large

percentage of voters with visual and mobility impairments to review their votes violates federal and state laws and should not be certified in New York.

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Compelling the use of confusing voting systems that predictably disenfranchise hundreds of thousands of voters, who are disproportionately voters of color and disabled voters, unnecessarily burdens the fundamental right to vote, in violation of federal law. U.S. CONST. amends. I, XIV; Voting Rights Act of 1965, Section 2, 42 U.S.C. § 1973; Americans with Disabilities Act of 1990, Title II, 42 U.S.C. §§ 12131-12165. In addition, Sections 1 and 11 of Article 1 of the New York Constitution preclude the use of discriminatory voting systems. N.Y. CONST. art. 1, §§ 1 (“No member of this state shall be disfranchised, or deprived of any of the rights or privileges secured to any citizen thereof, unless by the law of the land, or the judgment of his or her peers, . . . .”); 11 (“No person shall, because of race, color, creed or religion, be subjected to any discrimination in his civil rights by any other person or by any firm, corporation, or institution, or by the state or any agency or subdivision of the state.”). Because voting systems that comply with federal and state law are readily available, there can be no justification for permitting New York counties to purchase full-face DRE voting systems for use as ballot marking devices.

For the reasons detailed in this letter, we strongly urge you to permit the purchase of only real ballot marking devices that were *designed as* ballot marking devices, and not the use of full-face DREs that are likely to disenfranchise hundreds of thousands of voters, particularly low-income voters, voters of color and disabled voters. New York’s accessible voting systems should allow all voters, including the visually impaired and other disabled voters, to verify their ballots independently and privately, and should not employ a confusing full-face computer screen.

Sincerely,



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