

**A LESSON IN LEGISLATIVE DRAFTING:  
HOW MISTAKES IN 1899 HAUNT NEW  
YORK'S QUEST FOR NEW VOTING  
MACHINES IN 2008**

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The late nineteenth-century saw a flurry of changes to state election laws, not dissimilar to changes we have seen across the United States since 2002. Then, as now, a grassroots reform movement seized on a series of Election Day problems to successfully push for vast changes in the way elections were run and votes were counted. Then, as now, new technology was at the center of the debate: specifically, reformers of the 1890s believed that new “lever voting machines” could save them from the corrupt, party controlled elections of the previous decades.

New York was at the epicenter of this reform. Following documented reports of elections corrupted by the misuse of paper ballots, counties throughout the state began to respond to pressure from reformers to purchase the new lever voting machines on a wide-scale. There were a series of changes to New York election laws in the 1890s, culminating in an 1899 effort to take full account of the rise of voting machines by adding a new article to the State election code entitled “Voting Machines.”<sup>2</sup> This law was the direct precursor to what is today often (misleadingly) referred to as New York’s “full face ballot” requirement (hereinafter referred to as the “Machine Ballots Law”).

In ways its authors could not have imagined in 1899, this provision would have a huge negative impact on New York’s ability to choose the best electronic voting system in 2008. With some minor revisions, the 1899 read almost exactly as the full face ballot requirement reads today. In relevant part, it stated: “*All ballots shall be printed in black ink on clear, white material, of such size as will fit the ballot frame, and in plain, clear type as the space will reasonably permit . . .*”<sup>3</sup> The legislation also defined ballot to mean “that portion of the cardboard or paper or other material within the *ballot frames* containing the name of the candidate for office, or a statement of a proposed constitutional amendment, or other question or proposition with

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<sup>2</sup> Act of Apr. 28, 1899, ch 466, 1899 N.Y. Laws 943.

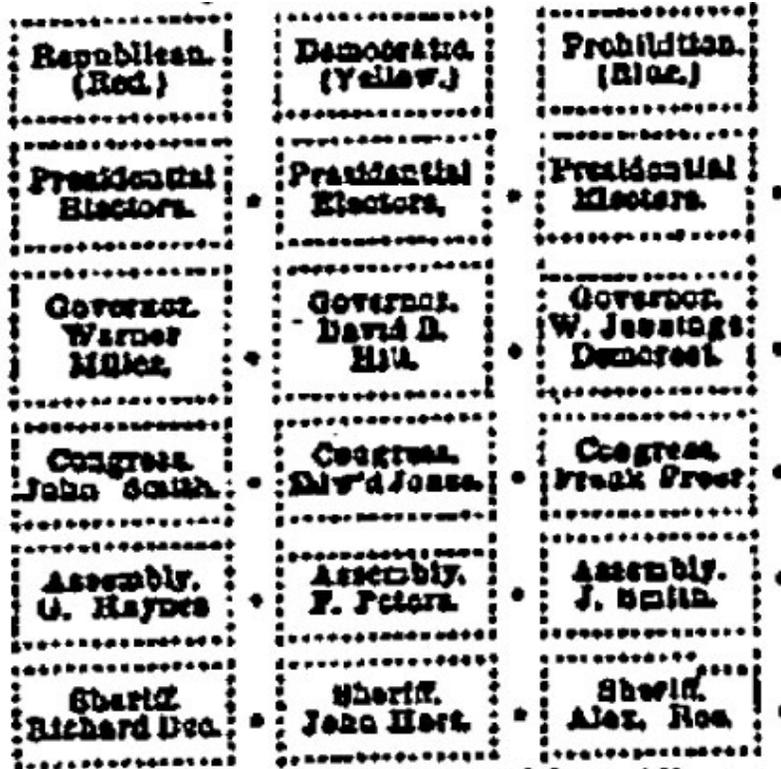
<sup>3</sup> Act of Apr. 28, 1899, ch. 466, § 167, 1899 N.Y. Laws 943, 946 (emphasis added).

“All ballots shall be printed and/or displayed in a format and arrangement, of such uniform size and style as will fit the ballot frame, and shall be in as plain and clear a type or display as the space will reasonably permit. Such type or display on the ballot shall satisfy all requirements and standards set forth pursuant to the federal Help America Vote Act.”

*Id.*; N.Y. ELEC. LAW § 7-104(1) (McKinney 2007).

the word ‘for’ or the word ‘against.’”<sup>4</sup> From the drawing of the face of a Myers lever machine that appeared in the New York Times in 1889, the meaning of the legislation becomes clear.

Figure 1: Myers Lever Machine



Source: *Voting By Machinery*, N.Y. TIMES, Nov. 24, 1889, at 10.

In this drawing, the squares of dots surrounding the written text represents the Myers’ machines ballot frames. The written text within each square is a ballot.

The drafters of this provision no doubt saw it as a simple law, with a simple purpose: to make sure that no candidate’s name would be left off a ballot (a frequent occurrence at a time when political parties designed their own ballots) in the lever machine

<sup>4</sup> Act of Apr. 28, 1899, ch. 466, § 183, 1899 N.Y. Laws 943, 950 (emphasis added).

frames, or placed somewhere on the ballot so that it was not wholly visible within the ballot frame.<sup>5</sup> In other words, the provision was part of a greater movement in New York and elsewhere to use election law to take power away from the parties and ensure fairer elections.

A century later, when New York decided (with a push from the federal government and the Help America Vote Act<sup>6</sup>) that it would replace its lever machines with new voting systems, the original meaning of the 1899 Machine Ballot Law (revised only slightly in the next century) took on new salience. In the case of touch-screen machines, *what, if any meaning, did the requirement “all ballots shall . . . fit within the ballot frame” have?* Unlike the lever machines of old, electronic voting machines did not have ballot frames. Did the requirement mean merely that candidates’ names must fit within the frame of the electronic voting machine screen, so that voters could see it? Did it mean something more? Or did it mean nothing, since these machines did not have ballot frames?

Unfortunately for New Yorkers, the State Board of Elections was responsible for determining how to interpret the words “ballot frame” in the Machine Ballot Law when it established voting system standards for New York’s new electronic voting machines, and it interpreted this statute to mean not only that a candidate’s name could not be left off or partially obstructed on the screen, or that all candidates for the same office must be listed on the same screen or page, but that *all candidates for all offices and all ballot initiatives in the election* must be listed on the computer screen at the same time.<sup>7</sup>

So instead of looking like this —

### Figure 2: Scrolling DRE Screen

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<sup>5</sup> See discussion *infra* Section I.A.

<sup>6</sup> See N.Y. ELEC. LAW § 7-104(1) (McKinney 2007); 42 U.S.C. §§ 15481, 15485 (2002).

<sup>7</sup> See Lawrence Norden & Jeremy Creelan, *Getting Out the Vote Just Got Tougher*, N.Y. DAILY NEWS, Nov. 21, 2005, available at [http://www.brennancenter.org/content/resource/getting\\_out\\_the\\_vote\\_just\\_got\\_tougher/](http://www.brennancenter.org/content/resource/getting_out_the_vote_just_got_tougher/); see also Memorandum from Jeremy Creelan & Larry Norden, Brennan Ctr. for Justice at N.Y. Univ. Sch. of Law to the N.Y. State Bd. of Elections & Citizens Election Modernization Advisory Comm. (Nov. 16, 2005) at 2, available at [http://www.brennancenter.org/page/-/d/download\\_file\\_39263.pdf](http://www.brennancenter.org/page/-/d/download_file_39263.pdf).

**DEFICIAL GENERAL ELECTION BALLOT**  
**SARASOTA COUNTY, FLORIDA**  
**NOVEMBER 7, 2006**

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**CONGRESSIONAL**  
**UNITED STATES SENATOR**  
 (Vote for One)

Katherine Harris	REP	<input type="checkbox"/>
Bill Nelson	DEM	<input type="checkbox"/>
Floyd Ray Frazier	NPA	<input type="checkbox"/>
Belinda Noah	NPA	<input type="checkbox"/>
Brian Moore	NPA	<input type="checkbox"/>
Roy Tanner	NPA	<input type="checkbox"/>
Write-In		<input type="checkbox"/>

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— where races were listed one at a time, much the way an ATM machine provides a user with one question at a time (i.e., “Deposit, Withdrawal, or Balance?”), the screen of an electronic voting system would look like this:

**Figure 3: Full-Face DRE Screen**

The screenshot shows a complex grid of contests for a DRE screen. Each row represents a contest with columns for different options or candidates. A large green box with a question mark icon and text is overlaid on the screen, stating: "You have not completed those contests whose titles are in pink. If satisfied with current selections, press 'Cast As Is'. Otherwise, press 'Make Change' to modify your selections." At the bottom of this box are two buttons: "Make Change" and "Cast As Is". The grid below contains various contest titles and options, with some cells highlighted in pink to indicate incomplete selections.

and list all races and offices *on the same screen at the same time*.

It is impossible to know why the State Board interpreted the provision in this way. But it would hardly be surprising if the party-appointed bipartisan board believed that requiring all offices to be listed on the same page would make it easier for voters to vote by party-line. If all candidates for the same party were listed in the same row on the same page, it would be very easy to check all of the boxes in the row without reviewing the names of the candidates or the offices for which they were running. If this was indeed the reason for interpreting the statute this way, it could not be more ironic: the 1899 Machine Ballot Law was one of a series of laws that was passed to prevent party machines from controlling what the ballot looked like.<sup>8</sup>

Leaving aside the fact that a plain reading of the text alone makes the State Board's interpretation dubious, it is clear from the historical record that it was not the legislature's intent to require all candidates, all offices, and all ballot initiatives to be listed on the same surface, regardless of voting technology used.<sup>9</sup> To be sure, all of the designs of the various machines used in the 1890s listed all candidates and offices on a single surface, and the 1899 Machine Ballot Law was drafted with the obvious knowledge of how the machines worked. But in the 108 years since the law was first drafted and subsequently revised, there is no evidence of any legislative activity or public debate that focused on the need to require that *all offices and initiatives* be presented on the same surface.<sup>10</sup> "The drafters of [the 1899 Machine Ballot Law] assumed the equivalent of a 'full face' presentation because that is what the existing voting machines provided, but in no way did they require such a presentation."<sup>11</sup>

As discussed in greater detail below, the State Board's 2006 interpretation is unfortunate not just because it is wrong, but because it has severely limited the type of electronic voting machines that New York can purchase today. More to the point, it has limited New York's choice to the most expensive and, in

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<sup>8</sup> For a complete discussion of why this interpretation runs counter to a plain reading of the text of the statute, see Creelan & Norden, Memorandum, *supra* note 7 at 1-2, 4-5 (explaining that the laws were passed to prevent party machines from influencing who was on the ballot).

<sup>9</sup> *Id.* at 4.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

the case of touch-screen machines (commonly known as “DREs”) to the least accessible, most confusing, and most error-inducing machines.

Though the move to electronic voting systems could not have been imagined in 1899, in retrospect it is clear that different drafting choices could have greatly reduced the risk that the State Board would misinterpret the meaning and purpose of the law. First, the Legislature could have achieved its goal (i.e., ensuring that no qualified candidate’s name was unfairly left off the ballots or outside one of the “ballot frames” so that it could not be read by voters) without referring specifically to the voting machine technology in use at the time. A requirement that each ballot fit within its ballot frame made sense in the context of lever machines, which has several ballot frames. It makes little sense in the context of DREs or optical scan machines (which read paper ballots much the same way a lottery ticket machine reads the bubbles filled in on a lottery ticket). Where there are no “ballot frames” similar to those that exist on lever machines, the use of the term is simply confusing.

The reliance on words that referred to specific design aspects of lever machines meant that when it came time to be applied to new technology, the task of interpreting the law became much more difficult. It would have been far better to use the broader language that appeared in an earlier statute in New York, before lever voting machines with ballot frames were widely used across the state. The earlier statute required “printed ballots for every election of public officers . . . and to cause to be printed in the appropriate ballot the name of every candidate whose nomination has been certified . . . ”<sup>12</sup>

Second, the Legislature could have created a clear record for the reasons behind the legislation. This could have come in the form of a committee report or a preamble; unfortunately, even today, this is something the New York State Legislature rarely does, making it very difficult for courts and administrative agencies tasked with interpreting legislation to adequately address legislative intent.<sup>13</sup> Given what we know of the historical reasons for passing the 1899 Machine Ballot Law,<sup>14</sup> a

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<sup>12</sup> Act of May 2, 1890, ch. 262, § 16, 1890 N.Y. Laws 482, 486.

<sup>13</sup> Jeremy M. Creelan & Laura M. Moulton, *The New York State Legislative Process: An Evaluation and Blueprint for Reform*, [http://www.brennancenter.org/page/-/albanyreform\\_finalreport.pdf](http://www.brennancenter.org/page/-/albanyreform_finalreport.pdf).

<sup>14</sup> See discussion *infra* Section I.A.

good committee report or preamble surely would have detailed legislators' concerns that disfavored but qualified candidates' names should not be obscured or placed in a manner that would disadvantage them or prevent voters from seeing them. Similarly, given what we know of the political discussion and debate over ballots and elections in 1899,<sup>15</sup> such a committee report or preamble almost certainly would not have included any discussion of the need to have all offices listed on the same page.

The now evident flaws in the 1899 Machine Ballot Law should serve as a caution to states considering new legislation for our still new electronic voting systems: all such laws should clearly state the goals and purpose of the legislation. And, to the extent possible, all such laws should attempt to avoid language that is technologically-specific. As surely as punch card ballots and lever machines have disappeared from American elections in the twenty-first century, so too will the Diebold electronic voting machines.<sup>16</sup>

#### I. HOW THE STATE BOARD GOT IT WRONG: THE HISTORY AND PURPOSES OF THE CURRENT N.Y. ELEC. L. § 7-104

The 1899 Machine Ballot Law is today Section 7-104<sup>17</sup> of New York's Election Law. The 1899 Machine Ballot Law itself was preceded by an important ballot reform bill in 1890 that is, in essence, the step-father of the 1899 bill. To fully understand the legislative purpose behind the 1890 and 1899 laws, it is necessary to read them in the context of the ballot reform movement in New York in the late nineteenth century.

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<sup>15</sup> See discussion *infra* Sections I.A., III.A.

<sup>16</sup> In fact, Diebold recently realigned the subsidiary that produces electronic voting machines and renamed the unit "Premier Election Solutions." ThomasNet.com, Press Release, *Diebold Election Systems to Become Premier Election Solutions*, Aug. 16, 2007, <http://news.thomasnet.com/companystory/528405>. The machines it sells, however, do not differ greatly from the machines Diebold has sold over the last several years. *Id.*

<sup>17</sup> N.Y. ELEC. LAW § 7-104(1) (McKinney 2007)

"All ballots shall be printed and/or displayed in a format and arrangement, of such uniform size and style as will fit the ballot frame, and shall be in as plain and clear a type or display as the space will reasonably permit. Such type or display on the ballot shall satisfy all requirements and standards set forth pursuant to the federal Help America Vote Act."

*Id.*

## A. HISTORICAL CONTEXT OF THE 1899 MACHINE BALLOT LAW

In 1888, evidence of blatant bribery, corruption and fraud in New York City's elections was documented by several reform-minded good government clubs, principally the City Reform Club and the Commonwealth Club.<sup>18</sup> At that time, all ballots were paper and were neither printed nor distributed by the government.<sup>19</sup> Political party machines would print their own ballots, often on colored paper, and distribute them to voters who would then place them in a ballot box.<sup>20</sup> This "system" allowed party officials to exclude opposing parties' candidates' names from their party's ballots.<sup>21</sup> Indeed, the practice of using separate ballots for different slates of candidates almost ensured that the voter was never apprised of the existence of all of the candidates running for a particular office. Party officials could also easily see what color ballot a particular voter placed in the box, thereby facilitating vote-buying and voter intimidation.<sup>22</sup>

Building on their findings, the reform groups established the "New York Ballot Reform League in 1889. The League sought passage of a ballot reform law that would require the "Australian ballot" to address fraud.<sup>23</sup> They recommended a bill that would require "[t]he names of all candidates for the same office should be printed upon the same ballot."<sup>24</sup> The League stated that this requirement was necessary to "destroy[] dealing and trading

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<sup>18</sup> The Society for Political Education, *Electoral Reform – With the Massachusetts Ballot Reform Act and New York (Saxton) Bill*, 25 ECONOMIC TRACTS, 13–15, (1889) [hereinafter *Soc'y for Pol. Educ*]; see also Hon. D. Foulke, *Reforms Greatly Needed* (decrying election abuses), N.Y. TIMES, Dec. 17, 1889; *City Reform Club at Work*, N.Y. TIMES, Dec. 19, 1889 (stating that the city reform group is determined to fight election abuses).

<sup>19</sup> Towns and cities (other than New York and Brooklyn) were only authorized to use voting machines as early as 1892. See Act of Mar. 15, 1892, ch. 127, § 1, 1892 N.Y. Laws, 197, (stating that any town or city in the state could order an automatic voting machine if a majority of that town or city's board voted as such). Even by 1899, however, very few jurisdictions used voting machines. See Douglas W. Jones, A Brief Illustrated History of Voting, <http://www.cs.uiowa.edu/~jones/voting/pictures/> (last visited Nov. 9, 2008) (stating that lever voting machines were first used in 1892 and slowly adopted across the country).

<sup>20</sup> See LEWIS ABRAHAMS, NEW YORK ELECTION LAW 218 (Denis & Co., Inc. 1950).

<sup>21</sup> Jones, *supra* note 19.

<sup>22</sup> See ABRAHAMS, *supra* note 20, at 218–19 (discussing the "bribery and corruption" resulting from the ballots used).

<sup>23</sup> *For Electoral Reform*, N.Y. TIMES, Dec. 10, 1889, at 8.

<sup>24</sup> *Id.*; Soc'y for Pol. Educ., *supra* note 18, at 18.

between candidates, [to] make[] independent nominations possible, and [to] make[] it impossible for the name of any candidate to be withheld from the voter.”<sup>25</sup> In other words, the League sought to make sure that every ballot presented all of the candidates for a single office in one place, to ensure that voters were presented with a meaningful and full choice. The reformers did not recommend that the candidates for *all offices* be printed on the same ballot.

The New York Ballot Reform Act was passed in 1890, and it included the Ballot Reform League’s recommendation for listing all candidates for the same contest on the same ballot, virtually verbatim:

There shall be a separate ballot for each class of offices to be filled, as now required by law, each with its proper caption and indorsement. *The names of all candidates for the same office shall be printed on the same ballot* and the name of every candidate whose nomination for any office specified in the ballot has been certified to and filed according to the provisions of this act, and no other shall be so printed.<sup>26</sup>

Thus, even after this Reform Act as passed, New York law still required “*a separate ballot for each class of offices to be filled.*” The statute did not require that the candidates for *all offices* be printed on the same ballot.<sup>27</sup>

As the New York Times noted at the time, the quest for Australian ballot reform was soon “eclipsed . . . by the invention of a ‘voting machine.’”<sup>28</sup> Many reformers supported machines as a solution to the corruption that continued, despite the 1890 Act.<sup>29</sup> The direct forerunner of the lever voting machines still in use across New York State, the Meyers machine presented all of the offices on the face of a single machine with small levers beside each candidate in essentially the same format as lever machines used today.<sup>30</sup> One notable difference from current lever machines is that the Myers machine (and the other voting machines developed during the same period) did not use a single,

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<sup>25</sup> Soc’y for Pol. Educ., *supra* note 18, at 18–19 (emphasis added).

<sup>26</sup> Act of May 2, 1890, ch. 262, § 16 1890 N.Y. Laws 482, 486 (emphasis added).

<sup>27</sup> *Id.*

<sup>28</sup> *Voting By Machinery*, N.Y. TIMES, Nov. 24, 1889, at 10.

<sup>29</sup> *The Automatic Voting Machine*, N.Y. TIMES, May 6, 1894, at 4; William M. Ivins, Letter to the Editor, *Election Law Reform*, N.Y. TIMES, Jan. 20, 1906, at 8.

<sup>30</sup> See *The Automatic Voting Machine*, *supra* note 29.

large, paper ballot with all of the offices and candidates printed on it. Those machines used many index card-sized paper or cardboard “ballots” each listing a single candidate’s name and placed within each of a series of “ballot frames” arranged in rows and columns.

The Legislature passed statutory provisions allowing municipalities to use voting machines and setting forth the contents and design of their ballots beginning in 1892.<sup>31</sup> For example, an 1896 law enabling towns and cities to use the Davis automatic ballot machines, stated in relevant part:

For each candidate . . . a push key or lever shall be set . . . and *adjacent thereto shall be attached a printed ballot of cardboard, or heavy paper, not less than three inches long and not less than two inches wide, upon which shall be printed in plain, clear type, as large as the space will reasonably permit, the name of the office and the name of the candidate . . .*<sup>32</sup>

An 1897 law enabling municipalities to use the Boma automatic ballot machines contained nearly identical language, changing only the dimensions of the ballots.<sup>33</sup>

None of these provisions included any language that required the presentation of all offices on a single surface at once. Certainly, as already discussed, the designs of various machines being developed at the time did so. Statutory provisions were obviously drafted with knowledge of how those machines worked.<sup>34</sup> But there is no evidence of any legislative activity or public debate that focused on the need to require the presentation *all offices* on a single surface. The 1890 legislation for paper ballots accomplished the important reform of ensuring that *all candidates* for a particular office are presented on the same ballot.<sup>35</sup> The drafters of these statutes assumed the equivalent of a “full face” presentation because that is what the existing voting machines provided, but they did not require such a presentation.

The 1899 Machine Ballot Law, which became New York’s so-

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<sup>31</sup> Act of Mar. 15, 1892, ch. 127, 1892 N.Y. Laws, 197 (Myers machine); Act of May 24, 1894, ch. 764, 765, 1894 N.Y. Laws 1916, 1924 (Myers machine); Act of Apr. 21, 1896, ch. 339, § 3 1896 N.Y. Laws 288, 288–89 (Davis machine); Act of May 17, 1897, ch. 449, § 3, 1897 N.Y. Laws 583, 587 (Boma machine).

<sup>32</sup> Act of Apr. 21, 1896, ch. 339, § 3, 1896 N.Y. Laws 288, 288–89 (emphasis added).

<sup>33</sup> Act of May 17, 1897, ch. 449, § 3, 1897 N.Y. Laws 583, 587.

<sup>34</sup> See, e.g., Act of Apr. 21, 1896, ch. 339, § 3, 1896 N.Y. Laws 288, 288–89

<sup>35</sup> Act of May 2 1890, ch. 262, §§ 16–17, 1890 N.Y. Laws 482, 486–87.

called “full-face ballot law,” further supports the notion that the Legislature did not intend to require *all offices and all candidates* to appear on the same ballot, regardless of technology used. It coexisted with the 1890 law that concerned paper ballots until after voting machines became virtually universal in New York State, in the first decades of the 20<sup>th</sup> century.<sup>36</sup>

As already discussed, the 1899 Machine Ballot Law requiring all ballots to “fit the ballot frame” defined “ballot” to mean “that portion of the cardboard or paper or other material within the *ballot frames* containing the name of the candidate for office, or a statement of a proposed constitutional amendment, or other question or proposition with the word ‘for’ or the word ‘against.’”<sup>37</sup>

Together, these provisions were clearly intended to address issues with the presentation of text on a voting machine to a voter, but did not include a requirement that all offices appear on the same surface; the voting machines available at that time necessarily involved such a presentation. Significantly, the provision’s requirements were directed toward machines that used rows of separate “ballots” placed within separate “ballot frames” and indicated a separate candidate on each “ballot.” For this reason, the requirement that “[a]ll ballots shall be printed . . . on . . . material, of such size as will fit the ballot frame”<sup>38</sup> was simply a statement of the obvious fact that individual “ballot” cards needed to fit into their designated “frames” in order to function properly, and the text on each “ballot” had to fit on each ballot to be readable. Far from suggesting any kind of substantive legislative intent to require that all offices are presented at once, this provision focused solely on ensuring that many index card-sized ballots would fit within voting machines’ “ballot frames” and that text was clear and readable on each “ballot.”

In sum, while the voting machines in use by 1899 inherently presented all offices on a single surface, the historical context establishes that the 1899 Machine Ballot Law did not include any such requirement – or even a hint of a legislative purpose – beyond ensuring that no words (or candidates) were rendered not visible to the voter by being unreadable or too large for an

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<sup>36</sup> See *supra* note 9 and accompanying text.

<sup>37</sup> Act of Apr. 28, 1899, ch. 466, § 183,, 1899 N.Y. Laws 943, 950 (emphasis added).

<sup>38</sup> *Id.* at § 167, 946.

individual “ballot” or its “ballot frame.”

The absence of such a legislative intent is further demonstrated by considering how the statute might have been written if its drafters had intended to require that all offices appear at once. If it had been a point of concern, the Legislature could have made any requirement that *all offices* be presented on a single surface explicit, as shown by the 1890 provision requiring the presentation of *all candidates* on a single ballot.<sup>39</sup> The Legislature instead remained silent on whether all offices must be included on a single surface and focused squarely on ensuring that the ballots fit within the metal frames intended for them.<sup>40</sup> Reading a “full face ballot” requirement into this statute thus would require a wholesale fabrication not only of an original legislative intent, but also of statutory language that simply does not exist.

#### B. 1899 TO PRESENT: NO EVIDENCE OF INTENT TO CREATE FULL FACE REQUIREMENT

In 1947, the New York Attorney General confirmed this reading of the statute in an Opinion on a related matter. When asked whether a local jurisdiction could display a lengthy constitutional amendment or local option question across two “ballot frames” instead of one in order to use sufficiently large type, or use separate paper ballots for such questions, the Attorney General replied as follows:

*The standard voting machine contains fifteen ballot frames for the submission of amendments, propositions and questions. The space provided in each frame is one and seven-eighths inches in width and one and one-half inches in height.*

Your inquirer expresses doubt that the “forms of submission” of the propositions can be printed on the cardboard designed to be inserted within the ballot frame, because of their length.

. . .

Answering your inquirer’s specific question, it would seem that all of the six amendments, three propositions and four local option questions described in his inquiry, can, as a practical matter, be printed on the ballot labels of the voting machine; that there is no need to consider submitting any of them by the use of separate paper ballots: *that it is neither necessary nor proper to use two of the ballot frames for any single submission; and that is [sic] is*

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<sup>39</sup> See *supra* note 35 and accompanying text.

<sup>40</sup> See *supra* text accompanying notes 37–38.

proper, though not necessary, to separate the local option questions from the amendments and propositions, by placing the former at the extreme right of the ballot[.]<sup>41</sup>

The Attorney General read the statute to require that each candidate or, in this case, each ballot question, fit within a single “ballot frame” of 1  $\frac{7}{8}$ ” x 1  $\frac{1}{2}$ ” rather than be printed on two separate ballot cards placed in adjacent frames.<sup>42</sup> If the “ballot frame” referred instead to the entire surface on the front of the voting machine, the inquiring jurisdiction’s proposal plainly would have complied with the statute because the local ballot questions would have all fit on the same surface as the other questions and offices. The Attorney General’s reading properly rested on the plain language of the statute as well as an understanding of its origins in the machines in use at that time.<sup>43</sup>

With only insubstantial changes over the years, the 1899 statutory provision is what has become Section 7-104 of the current election law:

**§ 7-104. Ballots; form of, voting machine**

1. All ballots shall be printed and/or displayed in a format and arrangement, of such uniform size and style as will fit the ballot frame, and shall be in as plain and clear a type or display as the space will reasonably permit. Such type or display on the ballot shall satisfy all requirements and standards set forth pursuant to the federal Help America Vote Act.<sup>44</sup>

“[D]espite repeated opportunities over 105 years to require [that *all offices* be included on a single surface], the Legislature has never done so.”<sup>45</sup> Various insubstantial amendments (and

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<sup>41</sup> 54 Op. Att’y Gen. 274 (1947) (emphasis added).

<sup>42</sup> *Id.*

<sup>43</sup> In 1916, the New York Attorney General opined on the distinct question of whether a jurisdiction could place the races for separate offices on two separate machines. 28 Op. Att’y Gen. 378–79 (1916). Reading both the precursor to Section 7-104 and another provision that required that all voting machines “afford [the voter] an opportunity to vote for as many persons as he is by law entitled to vote for,” the Attorney General opined that “only one machine can be used by a voter at any election” and that all general offices (as against presidential elections or ballot questions) must be presented on one machine in any event. *Id.* This opinion is thus of limited relevance in determining whether the statute permits a single machine to present different offices consecutively on different screens or ballot pages.

<sup>44</sup> N.Y. ELEC. LAW § 7-104(1) (McKinney 2007).

<sup>45</sup> Press Release, Brennan Center for Justice, Brennan Center Finds “Full Face Ballot” Law in New York Does Not Limit Election Officials’ Choice of Voting Systems (Nov. 16, 2005), *available at* <http://www.commondreams.org/news2005/1116-08.htm>.

**2008] A LESSON IN LEGISLATIVE DRAFTING 641**

changes to the numerical section heading of this provision) occurred in 1907, 1949, 1976, 1977, and 2004. “Even in 2004 when the Legislature was fully aware of the availability of scrolling DRE voting systems and multi-page optical scan ballot systems, its members chose not to include in its amendments to this section language to require that all offices appear at once.”<sup>46</sup>

**II. THE PRICE OF MISINTERPRETING N.Y. ELEC. LAW § 7-104**

The State Board’s misinterpretation of New York’s statutory requirements for ballots severely limited the State’s choice of machines to the few that present all candidates *for all offices* at once on a single surface.

There are basically three types of voting systems that jurisdictions replacing lever and punch card machines can purchase. The first is an optical scan machine: this machine requires voters to mark a paper ballot by filling in a bubble next to the name of her favored candidate, much the way she might fill out a lottery ticket or standardized exam score sheet.<sup>47</sup> She then places the ballot in an “optical scanner” that reads the ballot.<sup>48</sup> The 1899 Machine Ballot Law does not affect the requirements for this machine: the ballot used with this machine is not on the machine itself, it is on a piece of paper.

The second and third types of machines do display the ballot on the machine. These machines are both known as Direct Recording Electronic machines (or “DREs”).<sup>49</sup> The most common of these machines are known as “scrolling” DREs, which present the voter with one office at a time. The second, less commonly used machines are “full face” DREs. These machines present *all candidates, all offices and all ballot initiatives* on the same surface. In the recent past, most jurisdictions that have purchased DREs have purchased the scrolling machines,<sup>50</sup> and

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<sup>46</sup> *Id.*

<sup>47</sup> Editorial, *Virtues of Optical-Scan Voting*, N.Y. TIMES, Mar. 9, 2005, available at <http://www.nytimes.com/2005/03/09/opinion/09wed3.html>.

<sup>48</sup> David Orr, *How to Vote*, <http://www.voterinfonet.com/sub/vote.asp> (last visited Nov. 9, 2008).

<sup>49</sup> Eric A. Fischer & Kevin J. Coleman, *The Direct Recording Electronic Voting Machine (DRE) Controversy: FAQ and Misperceptions* (Dec. 14, 2005), <http://fpc.state.gov/documents/organization/60725.pdf>.

<sup>50</sup> Letter from author to John Ravitz, Executive Director, New York City Board of Elections, [http://www.brennancenter.org/page/-/d/download\\_file\\_39202.pdf](http://www.brennancenter.org/page/-/d/download_file_39202.pdf) (last visited Nov. 9, 2008). See also *Report Finds Improvements in New Voting Technology*, GOV’T TECH., Aug. 28, 2006,

for good reason. These machines are smaller, easier to store, more typical of the electronic interfaces people use in their daily lives, such as ATM machines, which provide voters with one option at a time, rather than all options at once, and are generally much less expensive.<sup>51</sup> The New York State Board of Elections ruled that these machines could not be used in New York because they violated the “full face” ballot requirement of the 1899 Machine Ballot Law.<sup>52</sup>

This decision was troubling for at least three reasons. First, research suggests that “voting machines with ‘full face ballot’ designs cause voters to commit errors in voting that lead to invalid [or missed] votes . . . more often than other types of ballots.”<sup>53</sup> Several usability experts have argued that, by presenting so much information on a single computer screen, “full face” voting systems are inherently confusing and thus are likely to cause more lost votes than other voting systems.<sup>54</sup>

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<http://www.govtech.com/gt/articles/100747> (“[M]ost states are selecting [scrolling] machines and designing ballots that will record more voters’ choices accurately.”).

<sup>51</sup> See Press Release, *supra* note 45 (explaining that scrolling DREs display offices and candidates on consecutive pages, allowing for smaller units, which cost 2-3 times less than “full face” DREs); see also *Security Issues Relating to the Selection of Permanent Voting Systems: Joint Hearing on Voting Machines Before the Council of New York Committee on Governmental Operations and Committee on Technology in Government* (2007) [hereinafter *Joint Hearing*] (statement of Lawrence Norden, Director, Voting Technology Assessment Project Brennan Center for Justice at NYU School of Law), [http://www.brennancenter.org/page/-/d/download\\_file\\_50676.pdf](http://www.brennancenter.org/page/-/d/download_file_50676.pdf) (last visited Nov. 9, 2008) (stating that “full face” DREs, as opposed to scrolling DREs, have a much larger screen and unlike ATM machines and scrolling DREs, do not present users with a single choice at a time).

<sup>52</sup> See N.Y. ELEC. LAW § 6209.2(a)(1) app. (McKinney 2008) (“In order for a polling place voting system to be considered by the State Board for certification, it must . . . [p]rovide a full ballot display on a single surface.”); see also Sewell Chan, *Voters Find Some Machines Harder to Use*, N.Y. TIMES, Aug. 28, 2006, *available at* [http://www.nytimes.com/2006/08/28/nyregion/28voting.html?\\_r=1&ref=nyregion&oref=slogin](http://www.nytimes.com/2006/08/28/nyregion/28voting.html?_r=1&ref=nyregion&oref=slogin) (stating that the New York State Board of Elections has held state law mandates the use of “full face” ballots, and thus, prohibits the use of scrolling DREs).

<sup>53</sup> Brennan Center for Justice, *The Machinery of Democracy: Voting System Security, Accessibility, Usability, and Cost 99* (Oct 10, 2006) [hereinafter *Machinery of Democracy*] (report of the Brennan Center for Justice at NYU School Of Law), *available at* [http://brennan.3cdn.net/cb325689a9bbe2930e\\_0am6b09p4.pdf](http://brennan.3cdn.net/cb325689a9bbe2930e_0am6b09p4.pdf); Press Release, *supra* note 45.

<sup>54</sup> *Machinery of Democracy*, *supra* note 53, at 99; Press Release, *supra* note 45.

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This should surprise no one who looks at the images of scrolling and full-face DRE ballots (Figures 2 and 3) shown earlier in this article.

An analysis of lost vote rates for the last several federal elections, conducted by Professor David Kimball of the University of Missouri seems to confirm the theory that full face ballots are inherently confusing.

**Table 1:**  
**Lost Vote Rates by Voting Technology**  
**“Top of the Ticket” Races<sup>55</sup>**

Year	Full Face DRE	Scrolling DRE	Precinct Count Optical Scan
2000	1.6%	—	0.9%
2002	2.2%	1.2%	1.3%
2004	1.2%	1.0%	0.7%

A “lost vote” rate of 1.0% is generally expected in “top of the ticket” races.<sup>56</sup> Some voters consciously choose not to vote for President, Senator or Governor.<sup>57</sup> In 2000, 2002 and 2004, the lost vote rate for full face DREs exceeded 1.0%.<sup>58</sup> It also consistently exceeded the lost vote rate of precinct-based optical scan machines – by 0.5% to 1.0%.<sup>59</sup> In New York, this would represent between 35,000 and 70,000 extra lost votes.<sup>60</sup>

<sup>55</sup> David C. Kimball, Summary Tables on Voting Technology and Residual Vote Rates, <http://www.umsl.edu/~kimballd/rtables.pdf> (last visited Nov. 9, 2008).

<sup>56</sup> *Machinery of Democracy*, *supra* note 53, at 98.

<sup>57</sup> *Id.*

<sup>58</sup> *See supra* Table 1.

<sup>59</sup> *Id.*

<sup>60</sup> 7.3 million New Yorkers voted for one of the two major Presidential candidates in 2004. *See* Presidential Election of 2004, Electoral and Popular Vote Summary (citing Federal Election Commission, 2004 Official Presidential Election Results, Feb. 11, 2005), <http://www.infoplease.com/ipa/A0922901.html> (last visited Nov. 9, 2008) (illustrating that in 2004 2,962,567 million New Yorkers voted for George W. Bush and 4,314,280 million voted for John F. Kerry).

**Table 2:**  
**Ethnic and Economic Disparity in Lost Vote Rates by**  
**Voting Technology**  
**2004 Presidential Election<sup>61</sup>**

Composition of County	Full Face DRE	Scolling DRE	Precinct Count Optical Scan
<i>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%

It has also been argued that voters who use computers less frequently than the general population, or who have adopted English as a second language – specifically, low-income voters 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.<sup>62</sup> Again, the statistics compiled by Professor Kimball bear out these concerns. In particular, the data suggests that the purchase of full face DREs could result in the loss of close to an extra 1% of Hispanics and 1.5% of low-income voters in top of the ticket races.<sup>63</sup>

<sup>61</sup> *Machinery of Democracy*, *supra* note 53, at 101.

<sup>62</sup> *Id.* at 100. *See supra* note 54 and accompanying text.

<sup>63</sup> *Machinery of Democracy*, *supra* note 53, at 100; *see supra* Table 2, the

**Table 3:**  
**Lost Vote Rate for State Ballot Initiatives by Voting  
 Technology**  
**2004 General Election<sup>64</sup>**

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

Moreover, the lost vote rate of full face DREs increases as we move “down ballot.”<sup>65</sup> 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.<sup>66</sup> Again, this difference in residual vote rates was significant *regardless of machine vendor*.<sup>67</sup> This could mean, for instance, that the purchase of full face machines in New York City could result in approximately 200,000 fewer votes on state ballot measures than it would if other technologies were used.<sup>68</sup>

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percentages of Hispanic voters using full face DRE, scrolling DRE are respectively 4.2% and 3.1%, so the lost rate resulted from full face DRE exceeds the lost rate resulted from scrolling DRE by 1.1%. The percentage of low income voters with income less than \$25,000 using full face DRE is 2.8% and 1.3% with respect to scrolling DRE, full face DRE exceeds scrolling DRE by a lost rate of 1.5%.

<sup>64</sup> David C. Kimball & Martha Kropf, *Voting Technology, Ballot Measures & Residual Votes* (2006) (unpublished manuscript), <http://www.umsl.edu/~kimballd/kkapr07.pdf>.

<sup>65</sup> *Cf. supra* Table 1, Table 3.

<sup>66</sup> *Supra* Table 3.

<sup>67</sup> *See generally* Kimball & Kropf, *supra* note 64 at 17–19 (discussing several factors that create residual votes without reference to machine vendor, but including such factors as, voting technology, ballot features, and voting equipment).

<sup>68</sup> 2,459,652 New York City voters registered to vote in the 2004 General Election. *See* 2004 General Election, City of New York, Statement and Return for the Office of President and Vice President of the United States, <http://www.vote.nyc.ny.us/pdf/results/2004/general/g2004recaps.pdf> (last visited Nov. 9, 2008). By multiplying the total number of voters (2,459,652) by the difference between the lost vote rates for full-face DREs (15.4%) and Precinct Count Optical Scan (8.8%) you can see that using precinct count optical scan machines in New York City could result in 162,337 fewer votes. Similarly, by

Second, voting machine vendors expect the “full face ballot” requirement to force them “to design and produce specially[] designed machines for New York State.”<sup>69</sup> As a result, manufacturers have indicated that the cost of each machine will be more than twice the cost of “scrolling” DREs that they sell in other states (which do not comply with a “full face” ballot requirement).<sup>70</sup>

Finally, the unnecessary limitation of choice imposed by this requirement left both the State Board and, in turn, county election officials in the unenviable position of having to certify or purchase machines that may not be the best fit for voters and that have never been used in an actual election.<sup>71</sup> To date, no county in the United States has used a full face DRE with a printer. One of the most obvious lessons of the post-HAVA era is that the use of unproven technology in heavy-turnout elections is certain to bring unexpected problems. The ultimate consumers of these machines – the voters and taxpayers – will thus be harmed by an unnecessary and unjustified constraint on competition.

### III. WHAT THE 1899 MACHINE BALLOT LAW CAN TEACH US

The clear lesson from the problems caused by the 1899 Machine Ballot Law is that legislative standards related to voting systems should detail “what the voting system should achieve, not how the voting system must achieve it.”<sup>72</sup> This translates into at least two important (and related) principles for those considering legislation related to new voting technology:

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multiplying the total number of voters (2, 459, 652) by the difference between the lost vote rates for full-face DREs (15.4%) and scrolling DREs (6.3%) you can see that using scrolling DREs in New York City could result in 223, 828 fewer votes. Therefore, the purchase of full face machines in New York City could result in a lost vote rate of approximately 200,000.

<sup>69</sup> Press Release, *supra* note 45.

<sup>70</sup> *See id.* (stating that the price of full-face machines with electronic ballots “ranges from \$7,500 to \$8,500 each” and the cost of scrolling machines “ranges generally from \$2,500 to \$4,000 each plus about \$300 or \$400 for a printer for each machine, and sometimes about \$2,000 to \$3,000 for one control unit per pollsite.”).

<sup>71</sup> *See* N.Y. ELEC. LAW § 7-202(1)(j) (McKinney 2007) (requiring all DREs to have attached printers that allow voters to verify their choices on a paper printout that can later be used to “audit” the electronic totals from the DRE).

<sup>72</sup> Douglas W. Jones Aff. Regarding Voting Systems Standards Proposed by the New York State Board of Elections in December 2005 ¶ 38, *available at* <http://www.cs.uiowa.edu/~jones/voting/NYvssCritique.pdf>.

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first, develop a clear legislative record, which will establish the purpose and reason for the statute; second, use legislative language that lays out standards for the voting system without referring to specific features of machines that exist at the time of drafting.

*A. Establishing Reason and Purpose of the Statute*

There are several ways to lay out the reasons for and purposes of a statute, and help avoid later misinterpretation and/or misapplications of the kind we have seen with New York's 1899 Machine Ballot Law.

1. Building a Legislative Record: Hearings and Committee Reports.

Perhaps most importantly, those supporting a bill related to voting technology should ensure that they have built a solid legislative record, through hearings and committee reports. The Brennan Center for Justice at New York University School of Law has documented the fact that, even today, the New York State Legislature holds precious few hearings on bills, and even more infrequently issues detailed committee reports that set forth the purposes of those bills.<sup>73</sup>

There are many reasons to be critical of the State Legislature's failure to hold hearings or publish detailed committee reports: among them is the fact that hearings and committee reports provide legislative committees and legislators the opportunity to adequately "analyze, debate, and fully consider a bill" before voting on it.<sup>74</sup> But the State Board's misinterpretation of Section 7-104 points to another reason that the failure to establish a legislative record can be so troubling: it leaves courts and administrative agencies tasked with interpreting those statutes without a key source from which to interpret legislative intent.

In the case of the 1899 Machine Ballot Law, a legislative record of hearings that detailed the reasons for the statute (in particular, the desire to thwart additional attempts by party

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<sup>73</sup> See Creelan & Moulton, *supra* note 13, at viii ("Only 0.5% of the major bills passed by the Assembly and 0.7% of the major bills passed by the Senate from 1997 through 2001 were the subject of a hearing [and only 1.1% of the major bills passed by the Assembly and 0% of the major bills passed by the Senate from 1997 through 2001 were the subject of committee reports.>").

<sup>74</sup> *Id.* at 7, 11.

bosses and their machines to keep disfavored candidates off ballots distributed to voters)<sup>75</sup> along with a committee report detailing the reasons for the “ballot frames” language (e.g., “we do not want a disfavored candidate’s name obscured by the lever machine’s ballot frame”), would have made it much more difficult for the State Board to misinterpret that statute’s meaning.

## 2. Adding Findings and Statutory Purpose to Bill

Legislators can also ensure that the goals of their legislation are properly understood by adding findings and a statutory purpose to their bills. As my colleague Deborah Goldberg, Director of the Brennan Center’s Democracy Program, has noted in a guide to drafting campaign finance laws, “[m]any statutes begin with legislative findings. The findings recite facts that help to explain why the law has been enacted.”<sup>76</sup> As with committee reports that could have provided the reason for passing the 1899 Machine Ballot Law, Findings that detailed the history of ballot design abuses by party machines in the nineteenth century would have made clear that the legislators that drafted and passed the law had no intention of requiring all offices to be listed on the same page or surface.

Deborah Goldberg details how a legislator might draft these findings.

As a practical matter, findings may be presented as a series of numbered sentences, each stating a separate fact that justifies legislative action . . . Drafters must balance the need for completeness with the need for simplicity. The point is to group facts into a reasonably short list of findings that explain the basis for the reforms adopted.<sup>77</sup>

Furthermore, explicitly stating a statute’s purposes will also help to prevent misinterpretation by courts or administrative agencies charged with interpreting those statutes.

### Avoiding Technology-Specific Language

If the legislature in 1899 had avoided the use of the term

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<sup>75</sup> See Douglas W. Jones, A Brief Illustrated History of Voting, <http://www.cs.uiowa.edu/~jones/voting/pictures/> (last visited Nov. 9, 2008) (“In the 1890’s, lever voting machines were . . . a high-tech solution to the problem of running an honest election”); see *supra* text accompanying note 29.

<sup>76</sup> Deborah Goldberg, *Drafting Campaign Finance Laws to Survive Challenges*, 95 NAT’L CIVIC REV. 11 (2006).

<sup>77</sup> *Id.* at 12.

“ballot frames”<sup>78</sup> (which appears to have been used only because the drafters of the 1899 Machine Ballot Law used the Myers lever machine as their reference point in drafting the bill) and instead followed the language of the 1890 Ballot Reform Act (to say something like “the names of all candidates for the same office” shall appear “on the same” surface),<sup>79</sup> it is doubtful that the State Board could have misinterpreted the 1899 Machine Ballot Law’s meaning.

Some of the most contentious debates around legislation and voting technology today are framed by technology-specific language. In particular, given the many software related problems we have seen with electronic voting machines, many activists (including in New York) have successfully pushed states to require voter-verifiable paper records for all voting systems.<sup>80</sup> Others have pushed for the complete ban of any DREs, arguing that the only paper ballots filled out by the voters should be allowed.<sup>81</sup>

There is no question that the electronic voting systems in use today have serious software related security and reliability vulnerabilities. And a requirement for voter-verifiable paper records and post-election audits comparing the paper records to the electronic records is clearly preferable to allowing jurisdictions to use electronic voting machines without any independent way of ensuring that a software malfunction has not corrupted election results.<sup>82</sup>

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<sup>78</sup> See *supra* text accompanying note 38.

<sup>79</sup> See, e.g., Act of May 2, 1890, ch. 262, § 16, 1890 N.Y. Laws 16 (giving county clerks detailed instructions that specify the content and format of each ballot without using technology-specific language).

<sup>80</sup> See Requiring Software Independence in VVSG 2007: STS Recommendations for the TGDC 4 (Nat’l Inst. of Standards & Tech., Discussion Draft 2006), <http://vote.nist.gov/DraftWhitePaperOnSLinVVSG2007-20061120.pdf> (stating that as of November 2006, “27 states mandate voter-verified paper records statewide” and “a total of 35 states use voter-verified paper records throughout”).

<sup>81</sup> See, e.g., Ivy Main, Virginia Bans New DREs in First Step Toward Verifiable Voting, [http://www.votetrustusa.org/index.php?option=com\\_content&task=view&id=2384&Itemid=113](http://www.votetrustusa.org/index.php?option=com_content&task=view&id=2384&Itemid=113) (last visited Nov. 9, 2008) (noting that Virginia Governor Tim Kaine has signed a law barring local governments from buying electronic voting machines and clearing the way for a migration to paper-based optical scanning machines).

<sup>82</sup> See Lawrence Norden *et al.*, The Machinery of Democracy: Protecting Elections in an Electronic World, [http://www.brennancenter.org/dynamic/subpages/download\\_file\\_39288.pdf](http://www.brennancenter.org/dynamic/subpages/download_file_39288.pdf) (last visited Nov. 9, 2008) (observing that “DREs without voter-verified paper trails

But New York's experience with the 1899 Machine Ballot Law suggests that to the extent it is politically feasible, legislators should avoid language that is technology-specific. Perhaps at some point, voter-verified *plastic* records will be preferable to paper records. And perhaps at some point, voting system manufacturers will develop direct recording electronic voting systems that are not wholly reliant on software: where, in the words of the National Institute for Standards and Technology an "undetected change or error in . . . software cannot cause an undetectable change or error in an election outcome."<sup>83</sup>

The better course in this case, and in other cases of statutes that regulate the purchase and use of voting technology, would be to lay out the purposes and goals of a statute and to use technology-neutral language to require that those goals be met.

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do not have available to them a powerful countermeasure to software attacks: post-election Automatic Routine Audits that compare paper records to electronic records.").

<sup>83</sup> Nat'l Inst. of Standards & Tech., *supra* note 80.