E. Addressing Network Vulnerabilities

The transmission of data poses significant security risks. Data can be intercepted, lost, modified, corrupted, and the like. The security problems are magnified when a network is used to transmit data. Connecting voting machines to telecommunication systems, which has been done for many years, has recently been shown to be an extraordinarily dangerous practice. In addition, the unchecked stream of security breaches of sensitive data at credit card companies, universities, and hospitals has shown that network technology today is largely insecure.

All provisions, such as Volume I, Sections 1.5.4, 4.4.2 and 5, that keep open the possibility that voting systems can be networked outside the polling place for data transmission or any other purpose must be eliminated from the 2005 Guidelines. Although the word "internet" does not appear in Volume I, except once in Appendix A, it is clear the authors of the Guidelines intend to open the door to internet voting without using the term. Internet voting should be banned for the foreseeable future because of massive vulnerabilities that have no easy resolution. In addition, the possibility that a wireless connection be used, as allowed in Volume I, Section 6.7 must be removed. As is specifically admitted in Volume I, Section 6.7, wireless connections involve substantial risk. Therefore, their use cannot be tolerated. Overall, the standards must prohibit any connection of a voting system to networks that extend outside the polling place, including wireless networks, internet-connected networks, and networks connected to a public telephone system.

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51 How to Hack an Election, N.Y. TIMES, January 31, 2004, available at http://www.nytimes.com/2004/01/31/opinion/31SAT1.html (stating that when the state of Maryland hired experts to test Diebold AccuVote-TS machines, they were able to change cast votes remotely using a modem connected to the voting machine).

52 See Privacy Rights Clearinghouse at http://www.privacyrights.org for a list of data breaches.

V. APPLYING A SYSTEMS PERSPECTIVE TO VOTING TECHNOLOGY

The previous 1990 and 2002 voting system qualification regimes focused on the machines as if they could be evaluated wholly separate from the conditions in which they are used.\textsuperscript{54} With the adoption of human factors guidelines, the EAC is taking a step towards recognizing the importance of an additional critical perspective on voting machinery performance. However, this approach should be extended to encompass many types of assessment into a voting systems evaluation approach. The Guidelines fall short of such a systems regime, conspicuously omitting voting systems’ field data as performance feedback.

A. The Human Factors Challenge: Users Are An Integral Part Of The Voting System

The lack of attention to voter and poll worker interaction with voting systems is a known source of problems. “Disenfranchisement by design” has been all too common.\textsuperscript{55} The severity of this issue has been highlighted by recent elections, particularly since the 2000 Presidential election.\textsuperscript{56} Usability problems are evident to the voter in the polling place. For example, during


\textsuperscript{55} Tokaji, supra note 26, at 1767, 1770 (There is unquestionably a racial gap that results from the use of at least some paper-based voting technologies. Also, the disabled are disenfranchised in that paper-based voting systems lack an audio capacity, thereby preventing people with visual impairments or those who cannot read from voting independently, and both punch-card and optical scan systems that require voters to hold an object to punch or mark the ballot prevent people with manual dexterity impairments from voting independently).

\textsuperscript{56} \textit{Id.}, at 1727 (On November 18, 2001, the New York Times, Washington Post and Sun-Sentinel all released the results of their inquiries into the Florida election (citing Sally Keatin, \textit{The Disenfranchised: Poor, Uneducated Rejected Most in 2000 Election}, SUN-SENTINEL, Nov. 18, 2001, at 1F; Dan Keating & John Mintz, Florida Black Ballots Affected Most in 2000; Uncounted Votes Common, Survey Finds, WASH. POST, Nov. 13, 2001, at
the 2004 Presidential election, voters repeatedly reported that upon reviewing their ballot before casting their vote, the votes had been misrecorded.\textsuperscript{57} Voters reported that it took five, seven, or even nine attempts of going back and correcting their ballot choices for the proper vote to register.\textsuperscript{58} This was reported primarily with presidential votes “jumping” from candidate to candidate.\textsuperscript{59} Vote jumping was also reported for non-presidential races.\textsuperscript{60} Additionally, poll worker interaction with voting systems resulted in problems such as voting delays. For example, voters reported that voting was delayed during the 2004 elections for a considerable amount of time as poll workers brought an electronic voting machine out to a disabled person who could not enter the polling place.\textsuperscript{61} This effectively stopped voting for all other voters in the precinct as there are procedural regulations that required a certain number of poll workers inside the polling place while voting is being conducted and two poll workers must accompany the DRE taken to the disabled person outside the polling place.\textsuperscript{62}

While belated, we are pleased that the 2005 Guidelines address the challenges of human factors. (Volume I, Section 2.2.7) The Guidelines appropriately identify the ultimate goal of human factor assessment, stating that the requirements in Section 2.2.7 intend to “provide a voting system and voting environment that all voters can use comfortably, efficiently, and with justified confidence that they have cast their votes correctly.”

However, the proposed 2005 Guidelines fall considerably short of delivering on this goal. The weaknesses of section 2.2.7 are especially problematic given that they will not go into effect until 2008.

1. Voting Systems Pose Complex Usability Issues

Usability focuses on the voter’s interaction with the voting system. Voters need to be able to cast their intended votes without confusion, without error, and without losing confidence in the system itself. Voting is an intrinsically challenging human factors problem. Voting systems must be usable by citizens regardless of age, disability, education, socioeconomic status,
familiarity with computers, literacy level, native language, and the like. This fact makes the voting population one of the most diverse user populations anywhere. Adding to the complexity of the situation is that the user population has zero training with the voting system and voting occurs very infrequently. Further complicating the usability issue is the lack of a well-trained expert group of administrators.\textsuperscript{63} Unlike other complex systems, voting systems are staffed by individuals who are not screened or selected for their knowledge of technology. The poll worker population is nearly as diverse as the voting population. In fact, since the poll worker population draws heavily on the elderly, it may present a population with less relevant experience than the population as a whole.\textsuperscript{64} Thus the human factors issues are complicated in all respects.

2. The Proper Framework For Usability Certification And Evaluation

The establishment of Guidelines to address human factors issues is a step toward recognizing that regulating voting systems requires us to consider the various needs and constraints of the individuals that interact with them. While recognizing the need for higher-level performance-based requirements, the 2005 Guidelines proceed to enumerate functional design requirements for usability—as they do for security—without adequately addressing a voting system’s level of performance, incorporating known standards and methods for assessing usability, or analyzing reported incidents during previous elections due to human factor considerations. The current state of the Guidelines will no more ensure voters’ effective interaction with voting systems than previous voting standards.

The 2005 Guidelines must define the degree of usability that can be expected from the voting system. Because the voting system must be robust enough to perform effectively and successfully under voting conditions, the Guidelines must move away from the current reliance on functional testing and embrace a more sophisticated and nuanced evaluation regime that relies

\textsuperscript{63} Tokaji, supra note 26, at 1787-88 (reports published in the wake of the 2000 election document that poll worker resources in many communities, especially urban ones, are stretched thin) (citing House Minority Caucus Report on Election Reform, Revitalizing Our Nation’s Election System (2001)).

\textsuperscript{64} Id. (Numerous reports since the 2000 elections have documented that the nation’s polling places are dramatically understaffed, often by elderly poll workers. The addition of equipment that poll workers will have to deal with can be expected to complicate the election process). See also Whitney Quesenbery, Oops! They Forgot the Usability: Elections as a Case Study, UPA Voting and Usability Project (Oct. 26, 2004), at 6, available at http://www.wquisability.com/articles/oops-they-forgot-usability.pdf.
primarily on assessing performance against some metric of usability.\(^{65}\)

The Guidelines must establish standards that ensure reliable casting of votes as a result of human interaction with the system. The design usability requirements set forth in Volume I, Section 2.2.7.3 propose to make human interaction straightforward - the voter indicates the intended votes, verifies the vote, can change the vote, and then officially casts the vote.

Usability evaluation by usability and accessibility experts and user testing with actual voters must be performed to ensure the voting system is usable instead of simply designed to meet functional requirements. Usability testing and design need to start early in the engineering process and testing needs to be repeated often.\(^{66}\) No future voting system should allow the incidental casting of votes, incidental under-voting, over-voting, or any of the other inaccuracies that are products of the human/system interaction.\(^{67}\) The usability problems of the past, which will likely still exist under the current 2005 Guidelines, must be eradicated by intensive testing under conditions close to those experienced during actual voting with a reasonably representative distribution of actual human voters.\(^{68}\) For example, representatives across race, age, and class need to be included in the testing samples to ensure equality of voting systems. The 2005 Guidelines need to reflect this type and level of user testing.

**LONG-TERM GOAL:**
- Voting systems that are both objectively usable and perceived as usable.
- Standards that ensure reliable casting of votes as a result of a system’s technical capacity and human interaction with the system.

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\(^{65}\) For example, given the large number of system crashes in the past elections, the Guidelines should specify an acceptable crash rate, system capability contingencies if a crash occurs, and other standards that ensure security is not compromised during a crash, such as standards that do not tolerate lost votes.

\(^{66}\) Sharon I. Laskowski & Whitney Quesenberg, *Putting People First: The Importance of User-Centered Design and Universal Usability to Voting Systems*, at 3, available at http://www7.nationalacademies.org/cstb/project_evoting_wq_sjl.pdf (stating that usability and the user experience should be the starting point for the design of any voting system).


3. Defining The Accessibility Requirements

The 2005 Guidelines need to ensure the opportunity for voters to vote independently and privately. Too often, voters who require assistance, because they are disabled or because they lack a full command of the English language, are forced to rely on others to help them cast their vote.\(^69\) This reliance leaves the voter vulnerable to intimidation and harassment that ultimately detracts from their voting rights.\(^70\)

**Accessibility**

The Help America Vote Act of 2002 mandates that every polling place shall have at least one voting station equipped for individuals with disabilities by Jan. 1, 2006.\(^71\) The 2005 Guidelines assert that the requirements of Section 2.2.7.1 are “meant to make the voting system directly accessible to as many voters as possible.” Despite the Guidelines promising intentions, they fail to clearly and effectively establish useable standards that voting systems can be evaluated against.

Precision is needed in many of the Guidelines’ sections intended to accommodate voters with visual, hearing, speech or cognitive impairments and mobility or manual dexterity limitations. For example, Volume I, Section 2.2.7.1.2.1.3 states “All voting stations using paper

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\(^69\) See Tokaji, *supra* note 26, at 1769 (citing Michael Waterstone, *Civil Rights and the Administration of Elections—Toward Secret Ballots and Poling Place Access*, 81. GENDER RACE & JUST. 101, 107 (2004) (arguing that federal voting rights laws should be interpreted to protect the right of disabled citizens to vote “in the same manner as their fellow citizens”)).

\(^70\) *Id.*

\(^71\) 42 U.S.C. § 15481(a) (Supp. 2002).
Public Comment on the 2005 Voluntary Voting System Guidelines from A Center for Correct, Usable, Reliable, Auditable & Transparent Elections (ACCURATE)

balls should make provisions for voters with poor reading vision.” The term “provisions” is left undefined and unquestionably too broad. Furthermore, whether a system meets the requirement set forth in this section cannot be evaluated. Another example is Volume I, Section 2.2.7.1.2.2.3.9, which states “[t]he audio system should allow voters to control, within reasonable limits, the rate of speech.” Again, the requirement uses language that must be defined because changes in the rate of speech can also potentially change pitch. Changes in pitch are undesirable and the requirements should reflect that pitch changes are unacceptable. Overall, the term “reasonable limits” is undefined and is not amenable to system evaluation. Additionally, the Guidelines include visual contrast requirements in Volume I, Section 2.2.7.1.2.1.4, but omit audio minimum signal-to-noise ratio requirements. In the past, audio on DRE machines was difficult to understand because this ratio was too low. These are just a few examples of similar problems throughout the new sections of the Guidelines where precision is needed.

In addition to requirements being undefined and not testable, the 2005 Guidelines set unreasonable standards for certain machine functions designed to accommodate particular kinds of disabilities. For example Volume I, Section 2.2.1.2.2.4 states, “if the normal procedure is to have voters initialize the activation of the ballot, the Acc-VS shall provide features that enable voters who are blind to perform this activation.” While it is, of course, desirable that voters with disabilities vote in the same ways as other citizens without additional assistance, this may not always be possible. As a result, specific mandates for a particular machine function and a particular disability must be justified, since they foreclose options that may have other advantages, such as features that can make a machine more accessible to another class of individuals.

Limited English Proficiency

Section 203 of the Voting Rights Act of 1965 mandates alternative minority-language access. The 2005 Guidelines merely scratch the surface of the need to accommodate non-English proficient voters. The requirements set forth in the 2005 Guidelines need to be clarified and refined to effectively improve the opportunity for multi-lingual voters to effectively vote

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72 Under Section 203 of the Act, a community of one of the four covered language minority groups, “American Indian, Asian American, Alaskan Natives or of Spanish heritage,” will qualify for bilingual voting assistance if more than 5% of the voting-age citizen population in a jurisdiction belong to a single language minority community and have limited English proficiency (LEP) OR where more than 10,000 voting-age citizens in a jurisdiction belong to a single language minority community and are limited English proficient AND the illiteracy rate of the citizens in the language minority group is higher than the national illiteracy rate. 42 U.S.C. § 1973aa-1a (2000).
independently and privately. Where the Guidelines do address the issue of non-English proficient voters, the language used is too broad or fails to tackle important distinctions.

For example, Volume I, Section 2.2.7.1.3 states that “for literate voters, the [Alternative Language Voting Station] shall provide printed or displayed instructions, messages, and ballots in their preferred language, consistent with state and Federal law.” Here, the general reference to state and federal law is too broad and at a minimum should incorporate requirements established by the Voting Rights Act of 1965.73 Furthermore, the Guidelines fail to address which languages must be supported, for example whether all twenty-eight languages currently included in the Voting Rights Act must be supported?74 The Guidelines also fail to address standards for languages without a written form.

Overall, the 2005 Guidelines need to be more detailed, exact and specific in terms of accessibility to be effective. In their current state, crucial gaps exist, which will make the Guidelines fall short of effective implementation at the voting station.

**LONG-TERM GOAL:**
- Maximize the opportunity for voters to vote independently and privately, without compromising important values like system security.

**V V S G  2 0 0 5 STOP-GAP RECOMMENDATIONS:**
- Include members of disabled populations in empirical research, in particular to verify vendors’ claims of the accessibility benefits of electronic systems.
- Effective implementation requires clarity and precision in the definition of terms.

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74 The most recent determinations of covered jurisdictions were determined by the Census Bureau on July 26, 2002. The 28 languages, as mandated by the Voting Rights Act, include Alaskan Native (Other), Aleut, American Indian (Other), American Indian (Unspecified), Apache, Athabascan, Central/South American Indian, Cheyenne, Chickasaw, Chinese, Choctaw, Eskimo, Filipino, Japanese, Korean, Navajo, Paiute, Pueblo, Seminole, Shoshone, Sioux, Spanish, Tohono O'odham, Tse, Vietnamese, Yaqui, Yuman, Zuni. 67, Fed. Reg. 144 (July 26, 2004), available at http://www.usdoj.gov/crt/voting/sec_203/203_notice.pdf.
B. Field Data Must Play An Integral Role In The Development Of Guidelines And System Evaluation

Voting system technology must be informed by experiences in the field. Currently, the Guidelines lack a process to incorporate suspected system failures or to address changing technology. In particular, the Guidelines fail to establish standards that ensure performance data from the field are used to improve systems so that the same problems do not contaminate future elections. Problems need to be investigated, understood, and then fed back into the processes of recertifying (at times recalling) existing systems and establishing the next set of Guidelines. Given the numerous incident reports during the past Presidential election, voters deserve accountability and proof that these failures will not continue to taint the voting process. The large volume of incident reports indicates a clear need for some kind of recall or recertification process. Although the incident reports were given over to the EAC, there is no process in place to ensure that the EAC considers the data collected.

For example, the Guidelines should require a feedback loop wherein data is collected in the field and provided to vendors, testing labs, and standard-setting bodies that are required to investigate and address the incidents reported. This practice is accepted and used in other industries where reliable performance of products is required, for example in the National Transportation Safety Board (NTSB), pharmaceutical industries, and even in the toy industries where safety is at issue. The Guidelines need to similarly follow the public reporting policies of these industries and agencies.

There were no fewer than 23,000 voting problems reported by the Election Protection Coalition (EPC) in the 2004 Presidential election and over 34,000 to date. In addition, the

75 Mulligan & Hall, supra note 22, at 11 (On November 2, 2004, over 2014 individual election incidents were reported, as part of the Election Incident Reporting System, that Election Protection Coalition volunteers classified as “machine-related” election incidents.).
76 See, e.g., “Reporting An Accident To The NTSB,” at http://www.ntsb.gov/aviation/report.htm (Federal regulations require operators to notify the NTSB immediately of aviation accidents and certain incidents).
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House Judiciary Committee received 57,000 complaints of election irregularities. These problems were reported mainly by voters, and were primarily centered around the human-machine interface of the voting machines. Problems included difficulties with casting ballots, such as miscasting of votes, inadvertent vote casting, and incomplete voting. Other reported problems included machines crashing or displaying error messages, out-of-service equipment, and difficulties with or malfunctioning of specialized equipment serving the disabled. Seventy-five percent of the reported problems were associated with a particular type of voting equipment (paperless voting machines) and ninety percent of all incident reports were associated with equipment from five vendors. Thus, even a cursory examination of field data gives investigators strong hints as to where to look to improve equipment to reduce problems with voting. Incident reports from the field provide valuable performance-based data that vendors and testing labs should be eager to understand and act on to improve systems. The voting standards must set up procedures whereby field data is reported and investigated, and problems are corrected in a transparent manner, for example by recertification or recall of offending equipment.

Further, incident reports from the 2004 Presidential election showed that many of the equipment failures implicated systems certified to 1990 standards since the majority of the voting systems used in that election were qualified to the outdated standards. These field data again identify critical information that must be fed back into the standards-setting process. Problems are reported with such voting systems frequently, despite being labeled “certified.” By allowing certification of equipment to outdated standards, error-prone equipment and poor technology continue to taint election results.

80 Id.
81 Id.
82 Id.
83 Mulligan & Hall, supra note 22, at 11.
A number of fundamental technical gaps in the standards have been identified for both DRE and paper-based systems. For example, in Carteret County, North Carolina, voters continued to cast votes using a 1990-certified system whose memory was full during early voting in 2004. Over 4,500 votes were completely lost when the Unilet Patriot voting system used could store only approximately 3,500 votes and over 8,000 voters used the system. The loss of votes could not have been prevented by functional testing nor by red team testing as the system nominally performed as designed but errors were not noticed or acted on by election workers. The standards need to incorporate this type of collected field data and incapable or suspect systems need to be decertified or recalled.

Additionally, parallel monitoring provides field data not reported by voters that should be analyzed and acted upon. In parallel monitoring, people cast scripted votes while being videotaped. The cast votes are compared to the scripted votes and the video record. For example, California recently began a parallel monitoring program in response to an Ad Hoc Touch Screen Task Force to study and make recommendations on possible improvement in the security of DRE voting equipment. This type of auditing comes close to mimicking the conditions of actual voting. As a result, parallel monitoring can help to expose malicious or poorly-designed code.

Despite frequent failures associated with 1990-certified equipment, most systems in use today are certified to 1990 standards. Although this excessive regulatory time lag for adoption of updated standards may be acceptable in slow-moving industries, it is not appropriate for voting systems of any kind, in particular computerized voting systems. Rather than being certified once and allowed to operate in accordance to outdated standards, voting systems must

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86 Although the system displayed error messages, these messages were not obvious and were apparently cleared as the system reset with each new voter. The error messages went unnoticed by poll workers while about 4,500 voters tried to cast their votes. See id. See also Janette Pippin, Warning Light Came On, State Tests Revealed, JACKSONVILLE DAILY NEWS, Nov. 18, 2004, available at http://www.jdnews.com/Processor.cfm?Template=/GlobalTemplates/Details.cfm&StoryID=27422&Section=News.
88 See id. at 12.
89 Id. at 6.
be designed such that they are reliable, long-lived systems that can be updated quickly in a modular manner and recertified as new standards are released. For example, although the U.S. still relies on military aircraft designed and built decades ago, outdated flight-deck instrumentation is swapped out and replaced regularly to make necessary improvements. Inadequate performance of certified systems in the field and improvements in available technology both dictate that the voting standards must be updated and implemented in a timely, regular fashion to ensure the integrity of future elections.

**LONG-TERM GOAL:**
- Problems with existing voting systems are identified, understood and fed back into the process of recertifying existing systems and establishing future voting standards.

**VVSG 2005 STOP-GAP RECOMMENDATIONS:**
- The critical data obtained from the incident reports of the past two Presidential elections (and other data) must be examined and fed back into the standard-setting process.

**C. Ensuring Equality Of Voting Systems: The Relationship Between Usability And Field Data**

It is particularly important to ensure the equality of different voting systems used across diverse populations. Embedded in data collected from the field is important information that can indicate inequalities between voting systems. If the data reveal that failures come from jurisdictions largely comprised of a particular race or class, potential issues of equality are raised and should be further explored. Field data that indicate such problems must be understood and addressed so that inequalities can be identified and eliminated. It is unacceptable to allow problems of this sort to go without response and corrective action. Given the large number of incidents of voting equipment malfunctions during recent years, including the past two Presidential elections, the standards must demand accountability and proof from vendors and testing labs that known equipment failures and inequalities will not continue to contaminate the voting process.
In addition, the Guidelines must reflect that the best practices and state-of-the-art tools are implemented as they become available. As new technology emerges for securing systems and/or for accommodating the disabled, the non-English proficient voter, and other voters who under the current voting system require assistance, the standards should be updated to reflect the improved capabilities in a timely manner. The technology used in voting systems should at least mirror the technology available to consumers. In reality, voting systems should be a level beyond considering the stakes to the individual and to the democratic system as a whole.

**LONG-TERM GOAL:**
- Standards that demand accountability and proof from vendors and testing labs that known equipment vulnerabilities and inequalities will not continue to contaminate the voting process.
- State-of-the-art tools implemented as they become available.

**VVSG 2005 STOP-GAP RECOMMENDATIONS:**
- Continued collection and analysis of voting field data and correction of inequalities.

**VI. NEEDED CHANGES IN DEVELOPMENT OF THE GUIDELINES**

The development of Guidelines must become a process of regular feedback and response. Existing technology must be updated to meet new Guidelines. It is unacceptable that archaic and flawed systems are used in the most important aspect of our country's democratic process.

**A. Unacceptable Results Of Delayed Implementation**

Voting standards must be updated as problems are identified and as technical capabilities improve. The proposed 2005 Guidelines continue to propagate delays in implementing improved standards. As the Guidelines' “Overview” Section states, new standards will not be implemented until 2008 (24 months following formal approval).\(^\text{91}\) Delaying implementation...

until 2008 perpetuates weak voting standards. The result of this timeline is that the majority of the systems in use will be certified to 2002 or 1990 standards. The problem is exacerbated with the 2005 Guidelines as they were intentionally meant to serve as “interim” standards and incorporate only minor changes from the 2002 VSS) so that they could be implemented by 2006.

By allowing the use of systems certified to outdated standards, our voting system remains vulnerable. Errors and data corruption introduced by delay and “grandfather” policies are entirely preventable and must be eliminated.

We recommend moving to a continuous, ongoing certification and de-certification process. Instead of certifying a system once, systems should be periodically reexamined. A system should be decertified at any time if it is found not to meet currently accepted standards of security, privacy, reliability, accuracy, or transparency. As standards evolve and our knowledge expands, systems that were once acceptable may no longer be.

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<td>• The Guidelines need to be implemented prior to 2006.</td>
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<td>• Vulnerable systems certified to outdated standards should be reexamined</td>
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**B. Opportunities For Administrative Improvement**

The current process of approving the Guidelines fails to adequately incorporate meaningful public comments. The public hearings on the new 2005 Guidelines took place just three days after the Guidelines’ release.\(^{92}\) There is no period for reply comments as is allowed in other rulemaking contexts, which deprives the EAC of the well-developed and articulated input produced as entities with competing and complementary points of view engage with each others’

comments. The compressed time schedule effectively denies the EAC from receiving valuable input from experts. The process of approving of the Guidelines should be handled more like a Notice of Proposed Rule Making (NPRM).

Furthermore, since the Guidelines are set to be approved in October 2005, the expedited timeline provides no opportunity for the comments created during the 90-day public comment period to be addressed, understood, and implemented. This process also effectively denies any realistic chance that the public can influence the creation of the standards. At a minimum, there should be a second review of the 2005 Guidelines so that some semblance of a discourse can occur on these critical issues.

**LONG-TERM GOAL:**
- The process of updating and improving the Guidelines is open and accessible.

**VVSG 2005 STOP-GAP RECOMMENDATIONS:**
- The guideline creation timeline needs to include a period for public comments to be addressed, understood, and implemented.

**VII. CONCLUSION**

Past elections have eroded public confidence in the trustworthiness, fairness and accuracy of voting systems and ultimately elections. It is imperative to restore public confidence. Voters and election-related jurisprudence demand that every vote has equal weight and each vote is counted. Voters deserve to cast their votes with equal dignity without regard to disability or language. Voting systems should accurately capture voter intent, be fully auditable, secure, and transparent enough to support meaningful public oversight.

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93 At the conclusion of the 90 day public comment period and after the consideration of comments received, EAC commissioners will vote to approve the Voluntary Voting System Guidelines. The final version will be made available to the public at that time. See Voluntary Voting System Guidelines Introduction, Volume I, available at http://guidelines.kennesaw.edu/vvsg/intro.asp.

94 The Notice of Proposed Rule Making is published in the Federal Register to notify the public of the proposed issuance of rules and regulations. The NPRM typically gives 60 days for public comment from any and all interested parties, and an additional 30 days for reply comments. Original comments may still be filed in the reply comments window. 5 U.S.C. § 551. The Federal Aviation Administration, Federal Communications Commission, National Telecommunications and Information Administration, and Environmental Protection Agency are examples of agencies that follow NPRM procedures.